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AN ADDRESS.

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The ancient Roman and the ancient Greek when on the eve of an important undertaking, began the work by the consultation of an oracle and by the effusion of blood on the altar: a sacrifice that was made to conciliate the Genius of good Fortune. Sometimes in place of the rude and repulsive act of the burnt offering, there was substituted some other rite of more agreeable nature. This was often an address, in which, for the urgent prosecution of the proposed undertaking and for animating inspiration of its actors, the speaker marshaled in the brilliant periods of sublime eloquence the great and admirable examples of the past.

Greek literature, which, through its innate excellence, has outlived the destructive agencies of time, fashion, change and revolution, contains some of the best examples of such eloquence. The addresses of Isocrates, stimulating to noble action, remain as imperishable parts of Grecian literature, in the same marked and prominent outline, as in the Athenian landscape stands forth the Acropolis crowned with the temple of Theseus and the immaculate Parthenon, What could more deeply fire the heart and urge on to determined action than the words of Isocrates addressed to the Lacedæmonians, when he exclaims: "Think how illustrious it is to exchange this mortal and fragile body for deathless renown; and with the few years of life which yet remain to us to purchase that celebrity which will endure through the ages."

In opening the way for peace, after a long period of domestic strife and civil war, what could touch the Roman heart more deeply than the last words of Otho, who to win the contest was on the eve of sacrificing himself, when he said: "I want neither revenge nor commiseration; some may have held the empire longer, but it will be said of no one that he has left it with more courage; let this struggle depart with me; even as though you had perished for me, but be ye still survivors." These words of self-renunciation, it may be remarked in passing, have found occasional illustration in the patriot who died before the eyes of the world, and quite as often have they found illustration in the physician who died in the camp of disease, not only unseen, but diligently forsaken by the world.

The Roman consul celebrated his entrance into office by a studied oration. A remarkable oration of this kind is that of Pliny the younger, which is devoted in the main to a panegyric of the character and prominent events in the life of Trajan, then emperor of Rome. In this address, efflorescent with painted phrase, the martial exploits of the Roman chieftain are extolled; the subjugation of nations and the extension of Roman power are portrayed by a partial pen. The character of Trajan, as delineated by his eulogist, besides furnishing to the soldier constant incentive to courage and action, reveals, also, an element which delights the son of medicine, as shown in Trajan's care for the sick and wounded. "O, Trajan, what comfort didst thou bring to the weary and what assistance to the sick! It was thy custom to never enter thy tent until thou hadst visited and surveyed those of thy fellow soldiers'; nor didst thou ever rest until all others had been provided for." And a Greek historian says that Trajan actually treated the wounded, and that when material for dressings was exhausted, he took off his own clothing and cut it into bandages.

The foregoing citations from the annals of antiquity show that the ancients, in entering on an important enterprise, as war against an enemy, or other matter of public moment, inaugurated the undertaking by an address in a public assemblage. In these orations the civilian, the statesman and the soldier find stirring incentive to action; and the physician finds in them ample instruction for his work of self-sacrifice; yet, in his work as minister for the relief of pain, he seeks in vain there for instruction, guidance and encouraging inspiration. Patience, endurance, tireless action, unsparing retribution for wrong done and contest to victory or death were the doctrines of the bard, seer and orator of olden times. The epitome of character, which commanded the greatest admiration when Rome ruled the world, is contained in the line, *Impiger*, *iracundus*, *inexorabilis*, *acer*, which anglicized is "Tireless, wrathful, inexorable, harsh." Excepting the quality of tireless, how remote are these characteristics from those of him whose mission it is to alleviate the sick and afflicted; for the patience, mercy and compassion of the physician have no place in the harsh picture of the model soldier depicted in the Horatian line.

In strong contrast with these barbarous traits, are those which the physician should have, as one learns from the counsel which Hippocrates gives the medical man when he enters the sick man's chamber. "On entering his room be careful in your manner of sitting; be reserved; appear in proper attire; be serious, and use brevity in speech; have cool self-command, which cannot be disturbed; be diligent and industrious in the presence of the patient; use care; if the patient objects to what is being done for him, listen to him and answer his objections properly; never lose your self-possession in the presence of an unexpected act or contingency; be prompt to meet and repress any disturbing emergency; always have a good will to do that which is to be done. And above all things, remember that nothing is to be omitted that can be of benefit to the patient." And further, the physician is to act with calmness and address, and infuse into the patient serenity and cheerfulness. Sometimes the patient should be reproved with firmness and severity; and at another time he should be consoled by kindness and careful attention.

These precepts, and the character which the physician should have as indicated by them, though many centuries old, embrace, in the main, the characteristics which the medical men of to-day should have. Summarized, these traits are a love of work, patient attention to details, ability to control one's self, as well as the whims and freaks of the patient, an exhaustless fund of the sunlight of cheerfulness to dissipate the clouds of melancholy which often surround the patient, and a flexibility to meet and provide for exigency and emergency.

Hippocrates says that medical art consists of, or is concerned with three things, viz: the patient, his malady, and the physician. And to-day, if our art be thoughtfully studied, these things are its prime components. Each patient is an isolated entity, and though he is akin to others, yet he has his own distinctive individuality—individuality which is shapen by his physique, his mentality, his habits, and his heredity. Each of these is to be a matter of study, and must be taken fully into account in the successful accomplishment of medical art. The disease also, though akin to others and susceptible of being grouped with them in a common class, has a special character of its own which marks it off from the members of its own kindred. These individual differences are so great that not unfrequently they confuse and mislead him whose powers of discrimination have not been trained and perfected by experience. The third constituent mentioned is the physician himself, into whose charge the sick man is committed, and whose province it is to study the patient and his disease. That medical art may have its highest and best accomplishment this third element must have the highest endowments which a theoretical, didactical, and practical training can impart.

When the physician is thus moulded and informed, or as the logician would say, is fully formed in extension and intention, then medical art will reach that excellence by which it was illustrated in the character of a Sydenham, a Frerichs, a Trousseau, or now is seen in an Osler. In the institution of which we are opening the doors to the sick world, to-day, I permit myself to hope and predict that some names equal in greatness to those mentioned will appear and give to the healing art its noblest consummation. As further guidance for the best care of the sick, Hippocrates says that the physician should have as his aids students of medicine. Such student should be placed as a watch over the patient, and directed to see that the latter does not take his medicine at improper hours; and thus watched the medicine will accomplish its purpose. The student should already possess some knowledge of the action of remedies; knowledge which will enable him to meet an emergency which may supervene during the absence of his superior. The student should also be entrusted with the nourishment of the patient, and should see that this is taken in proper amounts and at proper times. The student must also note everything that occurs, and report the same to the physician, so that the latter may be ignorant of nothing that is transpiring. Nothing should be committed to attendants who are ignorant of such duty. The care of the sick should be carried out attentively and knowingly; thus done, no blame will attach to ill success; and if the issue be fortunate, the event will be crowned with honor.

Thus far the art of medicine, or that which is contingent to it, has mainly been considered; but medicine has another important domain, and that is its science. Medical art is chiefly concerned with the cure of disease; instruments, apparatus, medicines, and all curative agencies. On the other hand, medical science searches for the cause of disease; it studies the abnormal combination of normal cells; the appearance of the latter at unusual times and unusual places. And to do this work well, this science must know equally well the tissues both in their sound and unsound states. In its development this science has proceeded by the pathway of analysis. Thus Bichat studying the structures by dissection found that they can be reduced again to a few simple membranes and tissues. These tissues are resolvable into cells of various forms and diverse groupings. This was believed to be the inmost recess of life into which the fiend of disease, unseen and of unknown form, penetrated and threw confusion into the beauteous arrangement which these cells have in health. Science, with tireless foot and unsleeping eye, has pursued this fiend of disease and detected him in the infinitely minute form of the pathogenetic microphyte.

For centuries this infinitesimal agent in the diseased organism ran riot, unseen, unsuspected, unknown. But science grasped a little beam of light, bent this into a key which opened this chamber in which the germ of disease has hidden himself, and solved the enigma. This solution has given immortality to the name of Robert Koch. Koch, like Columbus, has discovered a new world. This new world, like our own America four centuries ago, has opened a boundless field of undeveloped resources in which medical science and medical art may labor side by side. Here science is discovering and indicating the means by which human disease may be cured, and, what is yet more important, the way is thus being learned by which menacing disease may be averted. The researches of medical science are now promising the human race immunity against many diseases. In this field scores of diligent hands are at work, and from what has already been done there is promise of discoveries which will greatly change the methods of the practice of medicine. It is probable that we will inoculate against and prevent, or render mild and harmless, all contagious and infectious diseases.

The Latin language was a rich store-house, from which we have borrowed many words. The English, opulent in words of concrete nature, and forcibly expressive as far as the things of material nature are concerned, in its early growth, had few words of abstract character; and among the many which it derived from the Roman tongue, one which especially interests us here, is "immunity." In the Latin we find the word "immunitas," which meant an exemption from duties, taxes, and other obligations; it was limited to this meaning among the Romans; and also with us it had no wider range of significance until the last few years. How little did the Roman dream when he was coining this word that, in its transit from tongue to tongue, it would pass to remote centuries and would then represent the method by which man would elude the grasp of the great taxer—Disease, and stay the entrance of his still greater enemy—Death.

The wards in this hospital in which the sick and afflicted will seek for relief will furnish countless opportunities for the solution of these great problems which remain yet unsolved, or for the further verification of what is yet but partially verified. And in this scientific work nothing will contribute more to successful result than painstaking accuracy; there must be accuracy in observing morbid phenomena, and accurate record made of them; and at length from such a fund of facts truthful deductions can be drawn. Such a stony, tiresome path was long trodden by Koch and Pasteur before they received their crowns from the Genius of discovery.

An error sometimes committed by the scientific explorer is, that he often mistakes the unreal for the real; and impelled by his desire for renown, he announces a discovery, which subsequent investigation disproves. An example of this was Richardson's announcement of the cause of the coagulation of the blood. Richardson received a prize for what yet remains to be solved. A better example to follow is that of Edward Jenner, who withheld from the world his discovery of vaccination for nearly seventeen years; it was only after proof and counter-proof, and repeated verification that he ventured to announce it. It is sincerely to be hoped that nothing will be announced as discovered within these walls, which has not thus been proven and incontrovertibly established.

Among the duties of the interne, an important one is to make a careful record of the cases treated here. Such record does two things; the chief one is, that it insures careful work; for thus the work is committed to the pages of history, where it will be legible to many eyes. He will work the best and with the fewest faults, who knows that each act will be delivered to open, unchanging record. A second purpose of such record is, that it gathers facts, which become an addition to the general fund of medical knowledge.

The record kept may be brief, or it may be in elaborate detail. If the cases be those of usual occurrence, containing only what has often been observed, then the history made of them should be brief; and such record in epitomized form becomes a magazine, whence facts can be taken and tabulated into statistical computation. Many modern writers decry statistics, to my mind very wrongly; since the statistical is the equivalent of the inductive method of reasoning, which can be compared to a ladder of which each round is a fact similar to its fellows, and by the aid of which one ascends to a general truth. If error mar the conclusion, this can always be traced to, and found in the faulty observation and inaccurate record; or it may be in the improper grouping of the facts.

A few cases will present themselves of unusual or remarkable character; of such the history should be recorded in diffuse and elaborate detail. Such misnomers are not classifiable, and hence, are of no aid to the statistician; but they are important to the medical man, since they teach him the weighty lesson that new problems in pathology may arise at any hour, which will require new and unused principles for their satisfactory solution. In such cases the physician will proceed most wisely, if he follow the precept of Celsus, to compare such anomalous disease with other known forms, and to adopt for its management the treatment proper for the one to which it conforms nearest in character.

The purpose which has inspired the erection of Lane Hospital is two-fold in character; one great object is to furnish the medical student the opportunity of pursuing his studies to the greatest possible advantage, and of fully fitting himself for his future vocation. It is intended that he see medical and surgical art practised with that excellence, which will serve him as future model for guidance and imitation. A second object is, that the sick who seek this retreat for alleviation of their sufferings, will here find the best of skill and service, which can be planned by thoughtful intellect, and inspired by earnest sympathy. If, as has been stated, superiority of work will be promoted by the fact that the act of each physician and surgeon will pass into unmistakable and lasting record, so much more will it be insured by the presence of a medical class, which transcending the Argus of Juno is both many-eyed and many-eared in its guardian service. With such provisions and precautions, one finds a ready explanation of the fact, which has been observed, that the mortality of hospitals, which are under the charge of collegiate medical service, is less than that which is not supervised by such management.

If thoughtful care, vigilant attention, and trained skill be needed for the cure of the sick man, they are not all, and they will be sadly defective if they are not reinforced by another great quality—sympathy. Sympathy, like the quality Mercy, "is twice blessed: it blesses him that gives and him that takes." Sympathy is planted in every human breast, and like every natural virtue, it may grow and become the prominent characteristic of the individual; or it may be dwarfed, and in certain conditions this precious quality may be almost or quite extinguished. These conditions, I have observed, are constant contact with suffering, and is often best seen in the medical attendant, either physician or nurse, who has become exhausted from long continued and anxious work; in fact, unfitted for duty. I often recall what was said to me once by a lady, who for months was overburdened and worn by attention to an invalid parent: "It is my daily prayer that I may not become impatient and falter in my duty to my mother." Sympathetic care goes far in the cure of a patient. A harsh word, a petulant answer, or a frown in reply to some question or request of the patient, cuts more keenly than the surgeon's knife; and such petulance and impatience may fatally reinforce a lingering disease.

Briefly summed up, then, the cardinal qualities necessary for the successful management of our hospital, are good heads, good hearts, and willing hands; a determination on the part of each attendant to do superior work, and a fixed resolve to live and labor in harmony with his fellow workmen. All thus doing their duty, the work done will represent a picture, in which is portrayed a legion of busy laborers bearing a standard, inscribed with the words: *Self-sacrifice and Humanity;* and such a picture will realize the donor's hope, chiseled in marble at the threshold of this edifice, that the Healing Art may here be given an opportunity for the exercise of its humane skill, and that suffering Humanity may here find refuge and relief from its afflictions.

WAS DEATH CAUSED BY FEAR OR CHLOROFORM?

By R. T. STRATTON, M.D., Oakland, Cal.

Read before the Alameda County Medical Association.

The following case is, fortunately, one of rare occurrence. I believe it to be of sufficient interest for the consideration of this Society, and I have reported it at some length, as there is in my mind much doubt that the fatality was due to the anesthetic:

C——, male, American, æt 34; drug clerk, suffering from inflammation of left inguinal lymphatic glands, resulting in abscess, which confined him to bed for 8 days. Patient manifested much dread of the knife, and requested chloroform, but owing to the simplicity of the operation the incision was effected without an anesthetic, after dissuading him from its use. Tremor, struggling, perspiration and manifestations of fear, and great pain accompanied the trivial operation. His involuntary movements endangered the integrity of the femoral artery, over which the incision was made. A half ounce of pus was evacuated, and to effect good drainage, it became evident that another incision at a lower point, in the neighborhood of the saphenous opening, was necessary. On being notified of this, the patient again, and with greater intensity, manifested fear and anxiety and stated that he could not stand it without chloroform. He feared not only the further operation, but also the anesthetic. After examining the heart and finding only normal valvular sounds and good force, with a pulse rate of about 115, and noticing his state of mental suffering, which led me to fear that his restlessness would endanger important structures during incision, I consented and advised the anesthetic. Chloroform was administered on a napkin, folded, and held away from the nose one and a half inches, so as to allow free admixture of air with the vapor of the drug. The chloroform was dropped on the napkin in three or four parts, evaporation being practically complete before more was added. In all, 2 drachms of the anesthetic, according to the estimate of the druggist who supplied it, were used. Chloroformization was begun with much fear and tremor on the part of the patient. After about one minute elapsed he exclaimed excitedly: "Don't cut until I am under the chloroform." A little later, as if dreading that I would operate too soon, he said: "I can hear every word you say." Coincidently the movements became more marked and spasmodic, until about three minutes after the anesthetic was first given, a general spasmodic seizure of only moderate intensity and short duration occurred, and the chloroform was removed. At this point, after the discontinuance of the anesthetic, a small incision was made and a drainage tube attached to a probe, already introduced through the first incision and lying in the abscess cavity, was quickly drawn through the newly made opening. No manifestations of pain were observed. Three or four clonic spasms followed. Respiration was sufficient, and the patient's color was good, indicating a competent heart action. He then opened his eyes, apparently partially conscious, and attempted to raise his head and shoulders as if trying to see the wounds. Instead of the meaningless look of narcosis, he had a dazed and frightened expression of countenance. The pupils were midway between contraction and dilatation. After this he immediately became cyanosed, and the pulse was lost at the wrist. The cyanosis quickly increased in intensity, but respiration was rapid, free and full, gradually failing until voluntary respiratory efforts ceased, about three minutes after cyanosis began and four minutes after discontinuing the anesthetic. Efforts at resuscitation were without result. Death occurred evidently from cardiac failure, probably paralysis, immediately following the clonic spasms. No autopsy was held.

A few hours after the occurrence of this fatality, I certified to the City Health Officer that death resulted "from heart failure, from chloroform narcosis induced for surgical operation." The probability that fear and nervous shock were factors in causing the death occurred to me, but the thought that these could hold other than a minor position among the fatal agencies, seemed rather a temptation to avoid an unpleasant responsibility. I confess, however, at that time, to being in an unjudicial frame of mind, and I have a confidence that you will agree with me in the statement that the circumstances would at least excuse that condition. Sober after-thought, and a close analysis of the symptoms and study of the modes of death under both anesthesia and shock, have, however, tended to more strongly confirm the opinion, that in this case, the chloroform was a minor factor in the causation of death, and that fear, dread, and nervous shock were practically the cause of the unfortunate termination.

Among a large number of authorities consulted, with reference to the mode of death under chloroform, comparatively few venture further into the subject than to make the general statement that in any stage of the administration, death may occur from either cardiac or respiratory failure.

The two Hyderabad commissions have declared that death results from respiratory failure, the heart continuing to beat after respiration ceases. But this statement has not been generally received, and a third commission has been appointed to further study the matter. Investigators, whose conclusions in detail are reported, and from which I have failed to discover material dissent, give the mode of death during the different stages of anesthesia, as follows:

1. Death with the first few breaths, by the sudden shock of the anesthetic upon the cardiac ganglia, causing paralysis thereof. In these cases there is supposed to be either a state of abnormal susceptibility, or the anesthetic is given in too large amount at the first.

2. Sudden paralysis of the heart with the first incision early in the inhalation, by reflex inhibition of the cardiac ganglia. It is suggested that in these cases it is also due to shock, the patient not being sufficiently anesthetised. Deaths by this mode are most frequent with operations within the area of distribution of the fifth nerve.

3. In the struggling stage, or during rigidity, by tetanic fixation of the respiratory muscles. Respiration in these cases ceases before the heart's action.

Later, during the stage of complete muscular relaxation—even after the discontinuance of the anesthetic—death may result from either cardiac or respiratory failure, the heart generally giving the first indication of weakness. Or death may be caused by asphyxia, from paralysis of the tongue, or from general depression of the functions due both to the chloroform narcosis and to the shock of operation. But with this last class we are not at present concerned, as the patient never reached this stage of relaxation.

Did the mode of death of my patient conform to the above descriptions of death prior to the second stage of anesthesia? He did not die from sudden cardiac paralysis with the first few inhalations. He did not meet with death by sudden cardiac paralysis at the time of operation, for about one minute elapsed after incision before evidence of cardiac failure presented. Nor did he die of tetanic fixation of the respiratory muscles, for breathing was free and deep after marked cyanosis supervened. Yet these three modes of death comprise those generally accepted by the profession as occurring prior to the stage of muscular relaxation. Our patient died during the stage of excitation, yet not from respiratory muscular fixation, but unquestionably from cardiac failure—probably paralysis. Either, then, this was a death from chloroform, exceptional in its method—and the record of 500 deaths from anesthetics in general surgery prior to 1890 have offered much opportunity of investigation—or we must look to some other agency as the fatal cause.

Descriptions of death from shock and fear are by no means rare in medical literature. Several cases are recorded in which patients have died from shock or dread of operation before an anesthetic had been given. Numerous other cases in which dread, other than of operation or anesthesia, has suddenly resulted fatally are recorded. In my own experience I ascribed death to dread and shock in the case of a negro woman whom I was attending for pulmonary tuberculosis. I was suddenly called to see her on account of hemoptysis, but found her dead, yet the small amount of blood lost precluded hemorrhage from being considered the cause of death.

Dr. Fisher R. Clarke, of Stockton, who has given the subject of anesthesia special attention, in reply to a letter giving a history of this case, wrote me: "Your careful description of this case confirms me in my assertion that *dread* of the operation caused his death." Dr. Clarke is of the opinion that fright or dread can produce convulsions, and cites cases from the practices of Drs. Hudson and Leach of that city in support of this view. He considers the symptoms in this case warrant the opinion that the convulsions were the result of the nervous condition and dread rather than of the chloroform.

My personal experience has not led me to meet cases where dread has caused a nervous condition amounting to spasms, nor does the usual symptomatology of shock include this feature, but I can easily conceive that an extreme excitation of the nervous system by psychological means could have the same result as when induced by pathological or toxic influences, which are common causes of convulsive conditions.

Dr. Clarke cited the following cases: A lady, about 28 years of age, strong and healthy, with no organic or functional heart trouble, or other organic disease, engaged Dr. Hudson to attend her in an expected confinement, stating that a Boston physician, who had been with her in a previous labor, had assured her that she would die of hemorrhage should she ever again pass through a confinement. This assertion had produced such fear and dread of death by hemorrhage, that for the purpose of reassuring her the doctor engaged another physician to assist him. Labor was easy and normal, with little loss of blood; but the sight of a bloody cloth made her think the dreaded fatal hemorrhage had occurred, and she went into a clonic spasm; the heart stopped, and in three minutes the patient was dead. No drugs of any kind had been used, but death came purely from dread of a thing that never happened.

A lady patient became impressed with the fear that she would die from a runaway. Dr. Leach had treated this patient, and positively knows that there was no heart trouble. One night she dreamed that she was seriously hurt by a runaway. The following day she went for a drive with a lady friend. During the ride the horse became frightened and ran a few blocks, stopping at its stable and doing no damage whatever. The lady was found to be in a spasm, and, although assured that she was uninjured, in a few moments she was dead. Nothing was broken and no one was thrown out, but death occurred from fear or dread that she would die as she had dreamed, and as she had somehow been impressed that she would.

A lady in her first confinement, feared death from puerperal convulsions. She was assured there was no symptoms indicating convulsions, but immediately following the delivery of the child she had a nervous chill, which she mistook for an approaching convulsion. Clonic spasms followed, and in a few minutes she was dead. No chloroform had been used. Labor had been easy and natural. There was no hemorrhage or accident of any kind, and yet death took place from pure dread of a convulsion that did not occur, and death, too, in the short space of a few minutes.

I need not indicate specifically the points of resemblance of these cases to the one under consideration. The mode of death of the latter did not conform to that happening under chloroform; the amount of the drug used, especially considering its gradual inhalation, was much less than is usually sufficient to cause toxic symptoms, and the convulsive efforts began before a quantity of the drug had been inhaled sufficient, in my experience, to cause the spasmodic movements or struggling seen in chloroform narcosis. Manifestations of dread preceded and accompanied the administration of the anesthetic; just prior to the evidence of heart failure, the dazed and frightened appearance was noticed. Dread has caused deaths in other cases, accompanied by similar symptoms. All these facts warrant me, I believe, in considering that dread and fear on the part of the patient, were so extreme, that the nervous system could no longer stand the strain and paralysis of the cardiac ganglia terminated the sad and unfortunate case.

I shall close the paper with two practical points:

1. This case suggests that it is not improbable that deaths during

anesthesia have sometimes been ascribed to the drug used, which in reality were due to dread, fright, and nervous shock, and but indirectly the result either of the anesthetic or of the operation.

2. Whenever there is evidence of much fright or dread, prior to even a trivial operation, and especially if there is reason to believe that these may be greater than are outwardly manifested, the indication is to administer sedatives and cardiac stimulants, preferably morphine, strychnine, and alcohol, and await their physiological action before beginning with the anesthetic or the operation.

Our English *confrères*, particularly, deprecate the use of morphine during anesthesia, when heart failure is to be feared, but in combination with cardiac stimulants, the danger from it appears to be less than from dread, fright, or shock.

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THE SERUM THERAPY OF DIPHTHERIA.

By ALBERT ABRAMS, M.A., M.D., San Francisco, Cal., Professor of Pathology, Cooper Medical College.

Read before the San Francisco Medico-Chirurgical Society.

The important question of the day in Berlin is the serum treatment of diphtheria. And well might this question engross the attention of the world, for its solution would mean the demonstration of a principle equally applicable in other infectious diseases.

At the eighth International Congress for Hygiene and Demography, held in Budapest, September 4, 1894, and at the meeting of the Society of German Naturalists and Physicians, held at Vienna about two weeks later, many revelations regarding this subject were made. At the Congress Prof. Löffler, of Greifswald, dealt with the local treatment of diphtheria. He prefaced his paper by referring to the brilliant triumphs of Behring's serum-therapy, which made the local treatment of diphtheria an act of supererogation. His method of treatment was based on the results of investigations conducted for a series of years. The investigations had one object in view, that of determining what therapeutic agents would inhibit the growth of the diphtheria bacilli. Such agents to be of practical value must destroy the bacilli in the shortest possible time. It was found that liquor ferri sesquichlorati would destroy the bacilli at once. That this substance diluted with water five times would destroy the bacilli in five seconds. The vapors of toluol, benzol, and the ethers of the aromatic group were also efficacious. He employed therapeutically the following mixture:

Alcohol	60 volumes.
Toluol	36 volumes.
Liquor Ferri Sesquichlorat.	4 volumes.

By means of this mixture well developed cultures were destroyed in five seconds. If virulent cultures of diphtheria bacilli were introduced under the skin of guinea pigs by means of an oese, and immediately thereafter $\frac{1}{10}$ ccm. of the preceding solution were applied at the same site, the animals remained unaffected. If the applications of the solution were delayed, then the animals became infected or died. Other experiments equally convincing were cited. The mixture previously referred to was used on a large number of diphtheria patients by means of local application. As a rule, local treatment was followed in from 24 to 48 hours by a reduction of the temperature to normal. The diphtheritic membranous became softer and were easily removed. As long as any membranes patches remained local applications were continued. As the bacilli of diphtheria show recognizable colonies under the microscope after 4 hours, application of the remedy should be made every 4 hours, or, better still, every 3 hours, until the temperature falls to normal. After this, applications need not be made oftener than three times a day. Applications are made with a probe around the end of which cotton is fastened.

Other throat affections of a diphtheritic nature were also beneficially influenced by the application of the mixture, which was not only destructive to the specific bacilli, but to the complicating presence of pathogenic and saprophytic bacteria. The diphtheria serum, on the contrary, only annuled the vitality of the bacilli of diphtheria. This difference in action was of great clinical value, as the pathology of diphtheria was frequently identified with microörganisms other than the diphtheria bacilli. The local application of the mixture could also be employed as a prophylactic.

At the Budapest Congress the national committees formulated their conclusions respecting diphtheria. The conclusions of the German committee were the most lengthy, and can here only be succinctly reproduced:

1. Diphtheria is caused by the diphtheria bacillus. The absence of the germ excludes diphtheria.

2. Many affections show clinical manifestations of diphtheria, but they owe their origin to other organisms, like the streptococci, staphylococci, and pneumococci. Differentiation is only possible by bacteriological examination.

3. The severity of an epidemic of diphtheria is influenced by the following factors: (*a*) By the quantity and virulence of the bacilli of diphtheria. (*b*) By the presence of concomitant bacilli. (*c*) By the reaction of the organism.

4. Diphtheria bacilli are found in the nose and throat of healthy individuals, without resultant disturbances.

5. Diphtheria is propagated in the main by direct contact.

6. The patient is a source of danger as long as bacilli are demonstrable. The bacilli may preserve their virulence in the throats of individuals for months after recovery.

7. Enveloped in organic material and excluded from light the bacilli of diphtheria may preserve their virulence for months outside of the body. Dirt, therefore, and dark and moist habitations conduce to the dissemination of the disease.

8. The prophylactic treatment of diphtheria is as follows: (*a*) Clean, dry, and ventilated habitations. (*b*) Cleanliness of mouth, nose, and throat. Frequent gargling with weak solutions of salt and bicarbonate of soda; clean teeth. Destruction of tonsillar crypts and ablation of hypertrophied tonsils. (*c*) Cold affusions to the neck during epidemics of diphtheria.

9. Every case of supposed diphtheria should be examined bacteriologically.

10. Each case of diphtheria should be isolated.

11. The most active means of inhibiting the dissemination of diphtheria would be by protective inoculation, and it would be of value to examine Behring's serum in that direction.

12. In every case of diphtheria, disinfection must be made obligatory.

13. Convalescents must not be allowed their liberty, until examination shows the absence of diphtheria bacilli. They must, furthermore, bathe and be provided with clean clothes.

14. Literature respecting the disease must be distributed among the public.

The French committee demanded the exclusion of children from school who suffered from "simple sore throat."

At the Vienna Congress, Behring, of Halle, referred to "blood-serum therapy." He presaged, with pardonable enthusiasm, the results which this treatment would attain. Diphtheria would, in a few years, be as harmless as variola. In Germany and Austria, with 100 millions of inhabitants, nearly two millions of people die annually of diphtheria. By means of the blood-serum treatment, if employed not later than the third day of the disease, the mortality will be reduced to 10 per cent., and to 5 per cent. if treatment is instituted within the first 48 hours. At this rate, the number of people saved in ten years, will amount to 1½ millions. Dr. Wasserman read an interesting paper on "The Immunity of Healthy Individuals to

Diphtheria." His paper embodied the following essential facts: That the immunity enjoyed by adults was due to the presence in the blood of agents which had a destructive action on the diphtheria toxines. This fact was demonstrated by injecting the blood serum from such individuals concurrently with the diphtheritic virus into guinea pigs. By means of this simple method, the reaction of individuals to diphtheria could be demonstrated, a procedure of the greatest importance to nurses and physicians. He found that 1 c.cm. of blood taken from immune individuals sufficed to render innocuous ten times the lethal dose of diphtheritic toxines when administered to guinea pigs.

At this Congress papers were also read by Ehrlich, Aronson, and others, but as the substance of their papers embodies almost similar facts, I will disregard them and proceed to epitomize the treatment of diphtheria by means of Behring's serum (*heil serum*) at the present time. The serum therapy of Behring is based on the already well recognized fact, that blood taken from an animal immune to a certain disease, will, when injected into the blood of another animal, render the latter immune to the same disease. An animal can be rendered immune to a disease, if we gradually inject into its blood a definite quantity of virus, that is, an amount which will not produce death. As the animal becomes immunized, so also do we increase the immunizing properties of the blood. Behring secures diphtheritic immunization in animals by injecting virus in gradually increasing doses. This virus is obtained as follows: Nutritive bouillon is inoculated with diphtheria cultures, and after four weeks the bacilli are destroyed by the addition of a 0.5 per cent. solution of carbolic acid. The dead bacilli are deposited in the bouillon while the supernatant clear fluid contains the toxines in solution. If, now, the toxine solution is injected into animals, they develop fever, and specific antitoxines accumulate in their blood. The virulent fluid continues to be injected until a sufficient quantity of antitoxines develop. This is controlled as follows: From time to time a small quantity of blood is withdrawn from the animal and injected into guinea pigs in conjunction with the diphtheria virus. The quantity of the latter has been previously empirically determined, and is known as the lethal minimum dose. When the blood has been found to contain sufficient antitoxines so that 0.1 of the serum will render inocuous ten times the lethal minimum dose, it is called normal serum. 1 c.cm. of normal serum contains one unit of immunity. A serum of which 0.01 suffices to neutralize the effects of the lethal minimum dose, is a normal serum increased in strength ten times, of which 1 c.cm.

will contain 500 units of immunity. Whenever the blood serum of the animal contains 500 units of immunity in a given quantity (this number of units being necessary in the treatment of diphtheria in a child) of blood, then the animal is mature for therapeutic purposes. A definite quantity of blood is now removed from the animal, collected in sterilized vessels, and placed in an ice chest until coagulation is completed. To the separated serum 0.5 per cent. of carbolic acid is added and the process is complete. Horses are mainly used for immunization, as they provide a larger quantity of blood.

At the Institute for Infectious Diseases, in Berlin, the serum is used in all cases, however severe; for while they claim and prove by statistics, that the prognosis is better the sooner the serum is employed, it should always be given a trial in protracted cases, as its use is never harmful. Albuminuria has never been observed to follow its use. The action of the remedy on the local process is manifested by a rapid detachment of the membrane on the second day. A few hours after the injection, the temperature begins to sink, and when the remedy is employed in recent cases, a reduction of the temperature and pulse to normal is observed after 24 hours. Diphtheroid affections, like diphtheroid angina and scarlatinal diphtheria without diphtheria bacilli, are uninfluenced by the injections. The injections are made in situations where the skin can be raised in folds. Any hypodermic syringe may be used, although preference is accorded to Koch's syringe, with a capacity of 10 c.cm. The usual aseptic precautions are employed in making the injections.

The serum is at present very expensive, and it is impossible to obtain any from the factory of Meister Lucius and Brüning in Höchst, Germany. This factory makes the serum under the supervision of Behring and Ehrlich, although other establishments are employed in the same industry. This factory furnishes the serum in 3 different bottles, the contents of each of which must be injected at one time. Bottle No. 1, contains 600 units of immunity, (cost, $1.50) and suffices for cases where the treatment is begun on the first or second day. Bottle No. 2, contains 1000 units of immunity, (cost, $2.75) and is used in all cases of more than 2 days duration, or when the case is severe, or when there is danger of laryngeal complication. Bottle No. 3, contains from 1500 to 1600 units, (cost, $4.00) and is used in all adults, or in protracted cases of diphtheria in children. No other treatment beyond the injection is used at the "Institute." The serum is also recommended as a prophylactic, for which purpose one-fourth of bottle No. 1 will suffice. The immunity thus secured is supposed to last from 14 days to 3 weeks.

Encouraging reports from various sources with the *heil serum* are accumulating rapidly. At the Institute for Infectious Diseases, the mortality from diphtheria has been reduced 16 per cent., and they claim never to have lost a case where treatment was begun on the first or second day of the disease. When a pathologist who is usually immune to the misinterpretation, which often dominates clinical observation, admits the ever decreasing number of diphtheria cases coming to autopsy, it is evidence, however gross, that the mortality of diphtheria is getting less. This admission is made at the Pathological Institute.

In the October number of *Die Zukunft*, a literary journal, Prof. Behring, in an article bearing the title, "The New Diphtheria Remedy," takes occasion to express his opinion of Rudolph Virchow. After acknowledging the indebtedness of science to Virchow, and lauding his versatile attainments, he proceeds to regard him from the standpoint of the medical doctrinaire and theorist. He claims that Virchow's teachings relative to the etiology and treatment of disease are false. He also holds that Prof. Virchow arrogated to himself the origin of the *heil serum* treatment of diphtheria, and that its value was first determined by Dr. Aronson, at the suggestion of Virchow. Many other uncomplimentary remarks are made in this article, which members of the medical profession in Germany regard as disrespectful.

At a recent meeting, the Berlin Medical Society was largely attended in expectation of a discussion on the article of Behring. Virchow, the honorary president of the society was not present, and the temporary president announced that the matter would be brought up at the next meeting. He read a letter from Virchow, which was substantially as follows: He refuted the statement that he (Virchow) induced Dr. Aronson to experiment with the *heil serum*. On the contrary, Dr. Aronson had experimented with the remedy independently of him (Virchow). Further, that the *heil serum* was not that made under the direction of Behring, but was furnished free by the Schering factory. The results with the remedy were very good, and it was only discontinued, when the Schering factory was no longer able to supply it. He had never claimed to have discovered the serum. He owed the preceding explanation to the society in answer to the calumniator.

When in Berlin I attended a lecture on the "Diphtheria *heil serum*," by Ehrlich and Wasserman, collaborators of Behring. I was disappointed, for nothing new was said beyond that already known. The lecture was popular and not unlike the "Lane

Course of Lectures.'' Ehrlich insisted on the innocuousness of the *heil serum*. It should not be used sparingly. When the serum failed, the cause could always be attributed to delayed treatment, or to mixed infection, *i. e.*, to other organisms, notably the streptococci in conjunction with the bacilli of diphtheria. The serum had no action on the streptococci. Wasserman referred to an urticarial eruption of little importance, which followed a few days after the injection.

This is essentially the present status of the serum treatment for diphtheria.

431 Geary street.

PALATABLE MEDICINE.

By Geo. F. Hanson, M.D., San Francisco, Cal., Adjunct to the Chair of Materia Medica and Therapeutics, Cooper Medical College.

Read before the San Francisco Medico-Chirurgical Society.

There is, presumably, always present a disposition on the part of the physician to atone for his manifold sins against his patient's palate. The still small voice of conscience may not smite him, but the vigorous remonstrance of the patient at his next visit, leads Medicus to be always ready to attempt more palatable prescribing. In ancient times such efforts brought forth fruit that brings a smile to one who reads after a lapse of twenty centuries.

Cato, mingled with the odor of the cabbage which he recommended for so many ailments, whiffs of morsels far more savory. He even gave a formula for making cake that savors strongly of the epicure. Celsus made reparation for the atrociousness of some of his laxatives, among them glue and pitch and lizard's excrement, by adding grapes and honey and dried figs.

It can hardly be expected that the great mass of humanity should know enough of medicine to well appreciate drug values. Herein lies the strength of homeopathy—its hold not founded on the better judgment of mankind, but solely pendent by a thread of lacteal sugar to the palates of a following whose faith is mostly negative—whose belief is chiefly that its potencies can do no harm. That misnomer "potency" well tallies with the sick Missourian's answer, when he said he felt "powerful weak."

Of course the palatability of our medicines differs widely with the individual. The man who can empty a vial of castor oil down his throat at the drug-store counter and go off smacking his lips, can scarcely claim the same delicacy of taste as the sweet creature whom only the sight of his act profoundly nauseates. It is this sweet creature whom we have to conciliate. The horrid man goes on taking his castor oil without the necessity for intervention, drinking straight whisky in the intervals, in quantities that would keep the sweet creature in an uninterrupted state of profound anesthesia—and expectorating floods of tobacconized saliva. The polished pellets of the "little pill" man are not for him—they would get lost under his thumb-nail as he picked them up. A quarter of a pint of black draught suits him better, and the question of its palatability never enters his head.

Since the subject for the meeting was announced, a friend furnished me with a little work called "Palatable Prescribing." Without any preliminaries the author plunges into a sea of quoted recipes, many of them by prominent physicians, and evidently written for efficiency and not for taste. I will take the liberty of making generous excerpts from the long list of prescriptions of which the work is exclusively composed, and leave to you the question as to whether the book wears an appropriate title.

Although the nerves of taste are supposed to recognize only the four cardinal points of the gustatory compass, sweet, sour, salt and bitter, they are treated here to a variety of combinations that must render differentiation between taste and smell perplexing. For example: Elixir of hops and elixir of valerian, ammoniated with syrup of lettuce. Imagine a man trying to look pleasant while he swallows fluid extract berberis aquifoliæi fluid extract cascaræ sagradæ, syrupi sennæ comp. four times a day and on retiring. Admitted that it is often inconvenient, or impossible to prescribe palatable remedies for conditions which present, yet is it not true that a moment's consideration would enable us at times to give many nauseous or unpleasant drugs in tasteless forms?

Among the many mixtures in this little work, we find quinine with diluted sulphuric acid, in an aromatic vehicle; tincture of rhus aromatica with nux vomica and glycerine; fluid extracts of cascara and Oregon grape-root with morphine and hydrocyanic acid; infusions of gentian and of senna with a vehicle; sulphite of sodium with muriatic acid and chlorate of potash; Epsom salts with diluted sulphuric acid and a vehicle. Efficient—yes; palatable—perhaps, to a Hottentot.

For constipation is recommended: Fluid extract of rhubarb and dilute nitro-muriatic acid in cascara cordial. A patient with sensitive palate would almost prefer to remain constipated. For chronic enlargement of the spleen is suggested: Fluid extract grindelia squarrosa, fluid extract rhamnus purshiana. For bronchitis: Fluid extract yerba santa, liquor potassa, fluid extract grindelia robusta, with paregoric, squill, and ipecac. Some would rather endure a moderate attack of bronchitis under such conditions.

For laryngismus stridulus: Dilute hydrocyanic acid with fetid spirit of ammonia, tincture of hyoscyamus and a vehicle. Here the distress is so urgent that the little patient will usually take anything and perhaps question the soundness of his own judgment when he arrives at years of discretion.

About one prescription in every five of the half thousand which make up the book are as unpalatable as one would care to read. Many of the others call for pills, lotions, liniments, and ointments. A few are directed to be used as enemata, and it is fortunate for the recipient that the nerve endings of his gustatory branch of the fifth are not distributed far down the alimentary canal. I might continue to select from this charmingly variable assortment of pseudo-palatables, but acting upon the non-Shakspearean axiom, "Enough is enough and too much is a plenty," I shall consider some of the ways and means of making our doses really acceptable to the average palate.

Both the mineral and vegetable acids are generally pleasant when diluted well and flavored with a little lemon syrup or with glycerine and a few drops of flavoring essence made from the essential oils. The soluble crystaline acids may be given in the same way, and the insoluble in capsules. Of course benzoic acid may be dissolved by the aid of sodium phosphate, but the solution is unpalatable. A capsule or two followed by a liberal amount of water or of lemonade is to be preferred.

Aloes and aloin can be tastelessly administered in capsules, pill, or triturate, provided the uncovered triturate be given in a half teaspoonful of sauce or jelly, or swallowed very quickly with any liquid when placed well back upon the tongue. Asafetida is only tasteless and odorless in fresh sugar-coated pill or in capsule form. When necessity arises for asafetida in the liquid state, the circumstances are usually such as to allow its administration by the rectum.

Almost all the bitter remedies of the pharmacopeia can be given in pill or capsule, or in the concentrated, compressed triturate form. The list of such compressed pills or flattened triturates has grown to such immense proportions of late, that nearly every important drug or combination is found among them. Of the efficiency of many of them there is no question. Ot their palatability as compared with dessert or tablespoonful doses of many of our disagreeable remedies, there need be no doubt. The uncertainty of the liquid product is hardly comparable with the potency of the alkaloids. The former varies with the quality of the crude drug and skill used in its manipulation—the latter is definite, both in dose and action.

It is true that sometimes only the whole drug represents its virtues; digitalis, for instance. For its action on the heart, the tincture; for its diuretic effect, the infusion; for its combined virtues, the powdered English leaves. These are to be had in the compressed form, for example, in the pil. digitalis comp. of a Philadelphia house, combined with a little squill and niter. In sauces or jellies they are not tasted.

Nearly all the compressed triturates are so small that children readily swallow them in preserve, sauce, jelly, or thick cream. Occasionally patients complain that they are unable to swallow anything in the shape of a pill or capsule, no matter how presented. An attack of vomiting, in such patients, often brings to light fragments of undigested food three times the size of anything you would offer them as medicine. For such patients, small powders, buried in some sort of fruit confection, offer eligible inducements.

Pepsin with hydrochloric acid, can be made pleasant as well as attractive to the eye, by the addition of lemon and raspberry syrups. Many powders can be rendered more acceptable by the German method of using an oleo-saccharine addition to the active medicaments. For children not old enough to swallow a triturate, it may be powdered and submerged in jelly. Of course, at times, there may be a physician's objection to the use of even a small quantity of sweets as a vehicle, but this will not often happen. They are sometimes less objectionable than the alcohol of the fluid extracts and tinctures.

A druggist, formerly in my employment, has experimented considerably with cod liver oil. He makes a 55 or 60 per cent. emulsion (a rather larger proportion of oil than is contained in most of those on the market) of the best Norwegian light oil to be obtained, by means of a decoction of bleached Irish moss. The result is a snow-white cream, with well divided oil globules, as shown by the microscope. With this he incorporates by agitation 5 or 6 per cent. light malt whisky, and a variety of flavoring syrups. In one lot say syrup of wintergreen; in another vanilla flavoring; in another aromatic yerba santa; in another chocolate; in another raspberry syrup. The patient takes his choice. The ingredients are well adapted to produce the desired results, and the product in appearance, and palatability is a credit to the pharmacist. He makes a cream of castor oil in much the same way, with the possible addition in some cases of a few drops of vinegar, or of dilute phosphoric acid to give a tart taste—and turns out a preparation with the commonly offensive oil effectively disguised.

Tincture of chloride of iron may be presented in palatable form in many ways. Equal parts of the tincture and of diluted phosphoric acid mixed, with a like amount of glycerine and of lemon syrup added, makes an almost colorless, pleasant tasting drink when well diluted. A modification of Basham's mixture, with dilute hydrochloric acid in place of acetic, glycerine, syrups of raspberry or lemon, and water, gives the patient a tonic lemonade which aids digestion, while it gratifies the palate. Its clear wine-red color adds to its attractiveness. The tincture of the chloride dropped into milk, with or without a flavoring syrup, is a favorite way of administering the albuminate. To give a pretty pink color to mixtures in suitable cases, elixir lactopeptin is a favorite vehicle, and affords an agreeable taste with flavoring syrups, or glycerine to solutions of the digestive ferments.

When it is thought advisable to administer quinine in a liquid, it can be suspended in aromatic syrup of Yerba Santa, or in equal parts of that syrup with syrup of licorice. Saccharin is sometimes added, or ammoniated glycyrrhiza. Such a mixture is sweet and of pleasant flavor, and if some fluid be immediately taken and the mouth then rinsed no disagreeable after-taste will be noticed. Children as a rule eat the quinine chocolate tablets without any demur.

For disagreeable essential oils and balsams the capsule (to be filled by the patient with his little dropper, or from the bottle at time of taking) offers perhaps the most palatable method of administration, and gives him something to do. A patient who had suffered occasional acute exacerbations of eczema throughout a period of 20 years, was struggling manfully with a liquid mixture of oil of cade, which had been prescribed for him. After a few days he reported, dolefully, that he was a veteran of the Mexican war and of the rebellion, and had seen a fair amount of service in both—furthermore, that as a matter of course he was anxious to be rid of his annoying skin affection, but that if he was obliged to hold out against the enemy with that sort of ammunition he would be obliged to abandon his position.

Of course there is a limit to our attempts at palatability. The taste of many drugs can be somewhat modified, but it is a question whether they are much improved. The bromides are of that class—perhaps best given in the form of granular effervescents. Chloral-hydrate only loses its sting by liberal dilution. Some syrups assist in its disguise. The valerianates are unconquerable save in capsule. The soluble iodides can be given in saturated solution dropped into a capsule. Holding bits of cracked ice in the mouth for a moment before taking any disagreeable medicine tends to temporarily abolish the sense of taste. I might prolong these suggestions considerably, but I am sure that many here can add more agreeable formulas, and I trust they will be presented in the discussion which will follow.

An element in the question of palatability is difference of nationality and generations of hereditary tendency. The Teuton, to whom the taste of limburger is a delight, can hardly be expected to regard with satisfaction medicine that others might consider pleasant. Nor can the Norseman, whose taste is satiated with a meal of over-ripe fish, enjoy compounds that some people might consider palatable.

We are told that the nicest morsels of asafetida never reach our market; that the best large white or pinkish tears imported by way of the Persian Gulf into Bombay remain in that city to be consumed as choice *bon bouches* at the tables of the wealthy. Can we expect a people whose palates are tickled by a chew of catechu-red and lime and betel-nut to appreciate what we think palatable?

715 Clay street.

THE TREATMENT OF GONORRHEA BY RETROJECTION.

By W. J. Hanna, M.D., Sacramento, Cal.

Read before the California Northern District Medical Society.

In estimating the value of any proposed method of treatment of a disease, it is of the highest importance that the various forms of the malady should be recognized.

Keating defines gonorrhea as a specific inflammation, primarily involving the urethra of males and the vagina of females, accompanied by pain, swelling of the mucous membrane, and the formation of pus.

That we may have in the urethra, as in other organs and tissues of the body, several distinct varieties of inflammation will, I think, be generally admitted. Clinically, ever since the disease has been recognized, it has been observed that some cases present symptoms of great severity, while others run a comparatively mild course. Hence the terms true gonorrhea, or specific urethritis, and false gonorrhea, or non-specific urethritis.

In the first instance, the disease is caused by contact with a specific virus, and Neisser has pointed out that pus from these cases differs from other varieties of pus in the presence of a diplococcus occurring in groups of from ten to thirty, and surrounded by a transparent mucus-like material. This he called the gonococcus. In the second instance, the disease is produced by contact with irritating vaginal discharges, or it may be due to simple mechanical irritation of a sensitive point in a previously diseased urethra.

Bockhart has found by observation that while these cases are undoubtedly infectious, the secretions are free from gonococci, but two distinct organisms were found which differed in appearance and in behavior from the gonococcus. These same organisms were present, in several instances, in the vaginal secretions of women during menstruation, and in cases of leucorrhea and cancerous disease of the cervix. Pure cultures of these organisms, when inoculated upon the mucous membrane of a healthy urethra, produce a disease corresponding in symptoms, severity and duration, with the case from which the culture was taken.

The exact significance of the gonococcus is, however, hardly known, as it has been difficult in the first place to isolate it and obtain a culture, and in the second place individuals have been very reluctant to permit the inoculation of the virus. Animals, so far as is known, are not affected with the disease. Bumm has reported three cases of inoculation upon healthy urethræ of gonococci of pure cultures of the second, fourth, and twentieth generations, which produced the exact symptoms of gonorrhea.

The use of the abortive treatment, as recommended by many authorities, gives evidence that this distinction has not been made; for when it is applied in the severer forms of the disease it is nearly always without beneficial results. The ordinary method of treating gonorrhea embraces an injection outfit, and, in its list of remedies, includes well nigh the whole materia medica. These drugs are forced upon the sensitive mucous membrane of the urethra, and carry the products of inflammation along the canal, thereby causing numerous complications.

In 1864 Morgan made the first attempt at continuous irrigation. His apparatus consisted of an ordinary wash bottle with an afferent tube, connected by means of a rubber pipe with a conical glass nozzle; the afferent tube in the same manner, with a wooden mouth piece. The nozzle was firmly placed against the meatus and a gentle current of fluid forced through the urethra by compressing the air in the bottle. The amount of fluid used was very small, and but little benefit resulted from its use.

Dunham, and later, Harrison, recommended the use of a retrojection apparatus, which consisted of a soft rubber catheter and an ordinary bulb syringe. The catheter was introduced about five inches, and the urethra washed from behind the supposed seat of inflammation. Various medicaments were used in solution, and the results, especially in chronic cases, were said to be satisfactory.

Dr. Curtis, in a paper upon "The Treatment of Acute Urethritis by Prolonged Retrojections of Hot Water and Dilute Solutions of Bichloride of Mercury," in 20 cases had yet to find the first case which would not yield to this treatment inside of two weeks.

The publication of these results caused numerous experiments to be made by different observers in order to test their value. Brewer, in a report of 50 cases, found his greatest difficulty to be in getting the patients to make daily visits. As soon as the discharge was reduced to a simple moisture or mucous secretion, and they could get a mild astringent injection, they almost invariably discontinued their visits.

The object to be gained by the retrogression method is to completely distend the urethra with a mild antiseptic fluid, and by means of a constant current, wash away the products of inflammation. The use of this method necessitates the personal attention of the physician, but the results are so much in advance of those obtained by ordinary means, and the knowledge of having sent your patient away cured is a source of satisfaction, which fully repays one for the extra outlay of time and trouble.

The apparatus necessary to accomplish this is an elevated reservoir, a rubber tube, and a retrojection tube composed of rubber, guttapercha, or metal, the end having a bulbous tip with openings pointing forward. The patient is instructed to pass water, and the tube, well oiled, is then passed into the urethra, for a distance of about two inches in acute cases, or deeper as the occasion may require. The patient sits on the edge of a chair, with a basin between his knees, or stands in front of a sink. The connection is then made with the reservoir and from one to two quarts of a hot listerine solution, of the strength of 3 to 6 per cent. is allowed to flow along the urethra. At times, the patient is instructed to compress the end of the urethra, so as to thoroughly fill and distend the canal. No harm can possibly result should some of the fluid enter the bladder. These washings should be repeated once or twice during the 24 hours.

For the first two or three days the penis is enveloped in a hot lotion of lead and opium, which should be changed every 2 or 3 hours. At these times the patient is instructed to give the organ a hot bath. The bowels are freely opened by a saline cathartic, and the urine rendered alkaline by drachm doses of citrate of potash, repeated every 2 or 3 hours.

By the use of the retrojection tube with the hot listerine solution, if begun early, and if carried out thoroughly, the character of the discharge is changed in 2 or 3 days from a thick purulent to a thin muco-purulent or watery discharge. At this stage, after using the listerine wash, the irrigator is disconnected and a solution of chloride of zinc, 2 grains to the ounce, is passed through the retrojection tube by the aid of a Davidson's syringe, about 4 ounces of the fluid being used. The patient is given a capsule containing balsam of capaiba, 10 drops, and oil of cubebs, 5 drops, to be taken 3 times a day. The result of this method of treatment is to allay the inflammatory symptoms and modify the discharge, so that the disease is cured, as a rule, inside of two weeks.

426½ J street.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal.,
HENRY GIBBONS, JR., M.D., Professor of Obstetrics and Diseases of Women, Cooper Medical College, San Francisco, Cal., and
WM. FITCH CHENEY, B. L., M. D., Adjunct to the Chair of Obstetrics and Diseases of Women, Cooper Medical College. San Francisco, Cal.

Care of the Navel in the New-born.—SCHRADER discusses this subject in a paper read before the Obstetrical Society at Hamburg (*Centralblatt f. Gynäkologie*). He says the question as to the best treatment of the stump of the navel cord probably seems to many unimportant, because the frequency and danger of infection through the navel wound are not appreciated. Unfortunately we do not yet possess sufficient statistics on the subject. Recently, however, Ehrendorfer has published a large and very valuable collection of cases bearing upon this point, from the obstetric clinic at Innsbruck. Of 1,764 children born there, 95 died; and on 81 of these an autopsy was made. Infection of the navel was demonstrated in 16—therefore in 16.84 per cent. of all that died, or in about 1 per cent. of all the children under observation. Probably even this percentage is too small, if all the facts were known. Ehrendorfer rightly brings out that, without an exact autopsy, the cause of death in the new-born is frequently overlooked, especially since the illness due to infection very often is complicated by pneumonia, icterus, gastro-intestinal catarrh, etc,, and these sequelæ, unless an autopsy is made, are assigned as the cause of death. It is probably, therefore, that a much higher percentage of the new-born die of infection through the navel than is now believed. To prevent this Ehrendorfer recommends strict asepsis at the time of severing the cord and afterwards, and that the effort be made to secure rapid and complete mummification of the stump. This latter is to be attained first by thorough protection of the stump from moisture, and second by its exposure, so far as possible, to the air. To avoid moisture, Schräder advises that bathing of the infant, except for the cleansing immediately after birth, be entirely dispensed with until the stump has fallen off and the navel has healed. It is not so easy to permit free access of air, but to attain this, as far as possible, the stump should be wrapped in a piece of linen or mull, dry, not oiled. Eröss found in his observations and experiments on 1,000 infants in the clinic at Budapest, that a dry linen cloth is better for the stump than one oiled.—(*Archiv. f. Gynäkologie.*) This first dry dressing is usually not changed. The band is not to be too firmly applied, and should be frequently raised, to allow access of dry air. If the stump does not do well in this simple way, as is apt to happen with a large amount of Wharton's jelly, Schräder powders it well with dermatol; and after falling off of the cord the navel wound is kept powdered with dermatol for several days.

In the discussion that followed this paper WINDMULLER said he dresses the navel cord with dry charpie, using powdered boracic acid if there is a bad odor, but only the charpie again after the odor disappears.

ALY had had good results by dressing with a powder of alum and boracic acid; equally useful is powdered sugar.

LOMER also employed powdered sugar, and had never seen a bad result in 500 cases.

HOTTE was opposed to omitting the daily bath, because it was in every way beneficial to the new-born.

In reply, SCHRADER did not consider the bath so necessary that it could not be omitted for the first eight or ten days without disadvantage. Infants, he found, got along as well without it, and in fact less often developed snuffles.

Quinine in Pertussis.—In the *Jahrbuch für Kinderkeilkunde*, Bd. xxxviii, Hft. 1, BARON reports 50 cases of pertussis, in which he used quinine exclusively. In a small number of cases the beneficial effects were noted in two or three days, and by the fifth or sixth day a decided improvement was seen, both as to the number and severity of the paroxysms. When improvement once commenced, rapid progress was made toward recovery, even when the amount given was gradually diminished. As a rule it was necessary to continue the administration for three weeks. A relapse after the drug had been discontinued never occurred. The dosage advised is one centigramme for each month, and one decigramme for each year of the child's age, given three times daily, at 6 A. M., and 2 and 10 P. M. [In a little book on Diseases of Children, published a few months ago by OTTO HOUSER, First Assistant at Henoch's clinic in Berlin, he says that in that clinic quinine has proved a sort of specific for pertussis. He gives it in the dose mentioned above; but as children object to the medicine, struggle and then get a fit of coughing in which they vomit the drug, he always gives it just after a paroxysm is over. Houser says, as does Baron, that quinine decreases the number and violence of the attacks, makes the course milder and the duration shorter.—W. F. C.]

Intrauterine Injections in Puerperal Fever.—C. C. FREDERICK, of Buffalo, N. Y., says we have no right to jump at the conclusion, because a fever comes on during the puerperal period, that it indicates puerperal septicemia. Fever is not the only factor on which to establish a diagnosis. On the other hand, too great reliance must not be placed on the existence of putrid lochia, for, though usually present, this symptom is not always, and some of the worst cases of puerperal septicemia give no evidence by the quantity, appearance, or odor of the lochia. Pain is not a prominent symptom unless an inflammation of the pelvic peritoneum or a salpingitis develops. Tenderness or pressure over the uterus and ovarian regions is more common; and there is always enlargement of the uterus. There is no tympany unless peritonitis occurs.

The diagnosis is, therefore, narrowed down to the existence of fever, for which there is no other assignable cause; tenderness over the uterus and other pelvic organs; and on passing the sound, the presence of a deep, flabby, swollen and tender uterus. If a febrile attack during the puerperium can be assigned to any known cause, and septic absorption from the uterus can be excluded, then intrauterine irrigation is not only useless, but positively harmful. If septic absorption is going on, then simply washing out the uterus will not suffice. A uterus which has adhering to its walls septic tenacious mucus or rotting tufts of placenta cannot be cleansed by a stream of water running in and out, however strongly antiseptic the solution may be; the dull curette must first be used to loosen and remove these masses from the walls. Intrauterine irrigation cannot be properly done with the patient in bed and on a bed-pan. She should be placed on a table, in a good light, in the lithotomy position, the cervix brought into view with a speculum, grasped and steadied with the tenaculum. Then a curved, hard rubber tube is passed into the uterus and the irrigation made with any of the standard antiseptic solutions.—*American Gynecological and Obstetrical Journal*, October, 1894.

Hysterorrhaphy for Retroversion.—The operation of stitching the uterus to the anterior abdominal wall, for retroversion of long standing, has given excellent results. In a paper in the *American Journal of Obstetrics*, for December, 1894, on "Mechanical and Surgical Methods of Treating Retro-displacements of the Uterus," by ALFRED C. CARPENTER, of New York, the method of hysterorrhaphy is spoken of as one of the foremost at our command. Its *technique* is simple. With the usual antiseptic precautions an incision is made in the median line of the abdomen midway between the umbilicus and pubes; two fingers are introduced, adhesions, if they exist, are broken up and the fundus uteri brought up into the abdominal wound and grasped with vulsellum forceps. With a knife or small pair of curved scissors the peritoneum is denuded from the anterior surface for about the size of a 25-cent piece. Then two or three sutures of heavy silk-worm gut are introduced through the uterine tissue, taking a generous hold so there will be no danger of their cutting out by the traction put upon them by the weight of the organ, and at the same time guarding against penetrating the uterine cavity. These sutures are then carried through the entire abdominal wall on either side of the incision and are tied, thus fastening the fundus in the median line midway between the umbilicus and pubes. The sutures are allowed to remain about three weeks to assure firm union between fundus and abdominal wall.

SURGERY AND ANATOMY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital Sacramento, Cal.,

G. F. SHIELS, M.D., C.M., F.R.C.S.E., Surgeon Post-Graduate Department University of California, San Francisco. and

GEO. B. SOMERS, M. D., San Francisco, Cal.

Physiological Rest in the Treatment of Prolapse of the Rectum.—In certain cases where there is extensive prolapse, and operative interference has proved unavailing, DR. J. D. BRYANT advises turning aside the fecal current as a palliative means. In a case cited he gave this advice and states his reasons, as follows: (1) The sphincter ani was intact and retained the bowel within the pelvis, except during defacation, and then it prolapsed in spite of every effort. (2) An artificial anus, with all its objectionable features, was immeasurably preferable to the continuance of the suffering. (3) The rectal rest incident to the establishment of an artificial anus might, in time, cure the prolapse, or at all events, render life less burdensome with it. (4) I regarded it as a wise preliminary step for the comfort of the patient, if further radical measures were attempted. After operating on a case of rectal prolapse and considering the conditions and results, he submits the following propositions: (1) That the proper performance of the physiological functions of the rectum contribute greatly to the advancement of rectal disease and to the sufferings of the afflicted. (2) That the complete vicarious discharge of the feces through an artificial anus located in the sigmoid flexure, reduces the physiological demands on each structure of the rectum to the minimum. (3) That the lessening of the physiological requirements is commonly in direct proportion to its diminution of the fecal flow through the rectum. (4) That the cessation or lessening of the fecal discharge *per rectum* exercises a palliative and curative influence on diseases of the rectum. (5) That in certain cases of obstinate rectal prolapse, the formation of a vicarious channel for fecal discharge is justifiable, both as a palliative and as a curative measure. (6) That the preliminary establishment of such a channel for the purpose of cleanliness and the prevention of infection, is justifiable in many grave operations for prolapse of the rectum. (7) That the dangers attendant on the formation of an inguinal anus, are much less than those invited by the contact of fecal discharges with large operative surfaces of the rectum. (8) That the case just presented has been, without special risk, greatly benefited, and may be finally cured through the agency of an artificial anus. (9) That when cure takes place, great care must be exercised thereafter, otherwise the prolapse will return.—*Mathews' Medical Quarterly.*

Outerbridge's Operation for Hemorrhoids.—For practical purposes in doing this operation, we may divide the cases into two varieties: (1) Cases with only external tabs or with the more frequent arrangement of three tumor-like masses just inside the sphincter ani, usually considered most favorable for clamp and cautery or ligature. These may be dealt with in the following way: Grasp with a pair of thumb forceps, or insert the point of a tenaculum into the most prominent portion of the "tab" or tumor. Make enough traction at right angles to the gut to clearly define the mass. Cut off the mass with curved scissors pressed well toward the muscle. The edges of the raw surface are united with continuous catgut sutures. (2) Where the whole "hemorrhoidal inch" is dilated, thoroughly dilate the sphincter, then cut away a strip of mucous membrane and hemorrhoidal tissue down to the muscle, following the muco-cutaneous line all around the lumen. If external hemorrhoids are also present, in order to prevent recurrence, a strip of skin down to the sphincter ani is removed in the same way. The free edges of the skin and mucous membrane are now brought together with a continuous catgut suture. Hemorrhage is slight and easily controlled.—*Mathews' Medical Quarterly.*

Lateral Traction in Hip Disease.—The application of longitudinal traction is made in the usual manner. Lateral traction is obtained by a band of Canton flannel, or linen, passed about the thigh as close to the groin as possible, and attached to a weight over the side of the bed. Counter-traction is made by a similar band about the pelvis, fastened to a weight on the other side of the bed. The resultant of traction in two directions is traction diagonally between the two forces, thus bringing the traction at right angles to the plane of the acetabulum. In summing up the results of using lateral traction in a series of cases, PAGE comes to the following conclusions: (1) Lateral traction, properly applied, in connection with longitudinal traction, gives relief in some acute cases. (2) Lateral traction alone has no advantage. (3) The amount of weight in lateral traction should be in relation to the amount of longitudinal traction. A good proportion is five pounds lateral to ten longitudinal, applied twenty-five degrees beyond a right angle. The minimum useful proportion is one to ten, the maximum eight to ten. (4) The tension on the skin is the most important factor in limiting the amount of traction when the thigh is slightly flexed, abducted, and everted.—*Boston Medical and Surgical Journal.*

Sprains and Disabled Joints.—In a study of the treatment of sprained joints, BRADFORD concludes that many joints are made worse by excess of treatment, and become disabled from slight injuries, not from the injury, but from too great caution in treatment. He cites numerous examples. In summing up the treatment, he says it should be directed at first to checking the effusion and extravasation. This can be done in several ways: (1) By compression carried on for a short time. (2) By such means as would improve the circulation in the periarticular tissues, namely: the application of heat and cold, massage, and motion of the joint, which, however, should be restricted in character so as to prevent any excess of motion or stretching of the strained ligaments. The length of time for which it is necessary to protect from extreme motion will vary in any individual case according to the amount of reparative power, the degree of violence, and the age. But there would seem to be no justification for the popular opinion that "a sprain is worse than a break," an opinion that would appear to be based upon the over-cautious treatment following such injuries, which, by interfering with the proper circulation of the part, and guarded motion, increases the sensitiveness and produces a condition which, if unchecked, may develop a disabled joint, which is more tedious than an ordinary fracture.—*Boston Medical and Surgical Journal.*

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

Eye-Strain a Cause of Nocturnal Enuresis.—DR. GEO. M. GOULD reports a number of cases of children who were afflicted with nocturnal enuresis, that were cured by correction of the ocular defect by glasses. In most of the children the involuntary urination was accompanied by many other nervous symptoms, such as night terrors, headaches, chorea, etc., nearly all of which were also relieved or cured by wearing glasses that corrected the visual anomaly. Some of the patients had undergone operations and treatment that had extended over years without relief of the trouble.—*Medical News*, December 15, 1894.

Inflammation of the Middle Ear of Infants.—DR. A. HARTMAN gives the results of investigations of this subject in the Institute for Infectious Diseases, Berlin: (1) *Post-mortem* examinations and examinations of the ears of living children establish the fact that 75 per cent. suffer from inflammation of the middle ear. (2) Inflammation of the middle ear can nearly always be determined by an otoscopic examination. (3) The symptoms of the otitis media consist of restlessness, elevation of temperature, and loss of weight. Sometimes these symptoms are not present. (4) Very often the symptoms of otitis media are connected with broncho-pneumonic processes. Probably both processes are due to the same process, viz: asoiration. (5) Death can result in cases of otitis media, slow stone atrophy, or from an extension of the microorganisms into the cranial cavity, (meningitis) or into the blood (septicemia). (6) The inflammation of the middle ears of infants must receive treatment suitable for the varying conditions.—*Deutsche med. Wochenschrift—American Journal of Medical Sciences*, December, 1894.

Aural Massage by Condensation and Rarefaction of the Air in the External Meatus and Middle Ear.—DR. LAWRENCE TURNBULL describes a number of instruments designed to produce massage of the membrana tympani when thickened and adherent. They act by alternately rarifying and increasing the air pressure in the external meatus, or by producing motion of the membrane by the sound vibrations from the "vibrometer," or some similar musical sound-producing machine. A medical friend of the author's treated 100 cases of tinitus aurium and deafness by this means, with about 2 per cent. of successful results. The author's experience had been about the same. Conclusions were arrived at as follows: (1) Imperfect hearing depends on so many causes that no treatment by any one of the mechanical means should be employed until a careful diagnosis is made. (2) "Aural massage," with the use of condensation and rarification of the air in the external aural meatus and middle ear, will give mobility to the parts and cause absorption of foreign materials interfering with hearing. (3) Pneumatic massage is useful in middle ear disease in which there are adhesions to be removed or stretched. (4) No treatment of this kind will take the place of operations, for when all other means fail they must be resorted to, and with wonderful success in properly selected cases. All these means require close attention to conditions of the general system, as well as to other local troubles.—*Medical News*, December 1, 1894.

Progressive Myopia and its Treatment.—DR. KUHN says there are two forms of myopia: stationary myopia, due to lengthening of the axis of the eye, and progressive myopia, which is accompanied by lesions of the membranes, and which is a kind of glaucoma. The first variety is amenable to the use of glasses, properly chosen; the second requires special treatment. The most common concomitant symptoms and lesions of progressive myopia are the perception by the sufferer of broken lines, posterior sclero-choroiditis, atrophy of the choroid, floating bodies, softening and detachment of the vitreous, detachment of the retina, and atrophy of the zonula of Zinn, involving subsequent dislocation of the lens. DR. DEHENNE explains these troubles by supposing that there is a hyper-secretion of the intraocular fluids, with increased globe tension and consequent lengthening of the axis. The sclerotic is distended, and the choroid, being less distensible than it, is torn here and there. This leads to posterior staphyloma, migration of the pigment granules, and the development of choroiditis, with deposit of patches of exudation. It is these patches which produce, at the macula, the sensation of broken lines, just as the muscæ volitantes, complained of by the patients, are caused by the presence of the escaped particles of pigment in the vitreous. The retina finally becomes detached from the choroid, and the other lesions follow. The prognosis used to be most unfavorable, blindness being too often the consequence;

the condition has always been considered incurable. Iridectomy and drainage had been tried and found wanting in the majority of cases. Since 1882, Dr. Dehenne has had recourse to sclerotomy with invariable success. It is stated that every patient was able to use the eyes without fatigue after the operation. Ophthalmoscopic examination of patients operated on years ago has shown that the lesions had been arrested. Sclerotomy is performed as soon as floating bodies appear, and immediate operation is indicated when broken lines are seen together with ocular fatigue or *a fortiori* when posterior staphyloma and choroidal atrophy are made out. The operation is safe and painless; in two days the patient can resume his usual occupatiou.—*Lancet*, November 17, 1894.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. SIMMONS, JR.. M.D., Sacramento, Cal.

Auxiliary Treatment of Syphilis.—In one of his recent lectures DR. MAURIAC insisted upon a most important point in practice, and unfortunately one too often neglected—the necessity to treat the various morbid states of a general nature, which syphilitics present. When they are distinctly scrofulous; mercury is not injurious. It is quite as efficacious as in those who have a good constitution. It does not aggravate the scrofulous condition, but it does not attack it either. In these subjects, the treatment *par excellence* is that by iodide of potassium, for it often modifies the strumous constitution at the same time that it acts against the syphilis. It is often well to prescribe cod liver oil in large doses in the syphilitic adenopathies in strumous subjects, in gummata of mixed nature, which pertain as much to scrofula as to the syphilis. The tincture of iodine is also in these cases an excellent preparation.—*Journal Cutaneous and Genito-Urinary Diseases*, December, 1894.

The Blessedness of Beards.—It is to be feared that too many men deprive themselves of what Shakespeare calls, "Valour's Excrement" without counting the possible cost. Whether the beard be an ornament to the masculine countenance, we must leave the ladies to decide. It certainly has its uses in hiding a weak chin, and in some cases it seems to be cultivated as a vicarious compensation for a hairless scalp. It is not, however, in its cosmetic so much as in its hygienic aspects, that the blessedness of the beard—in which term we include the whole of the harvest usually claimed by the razor—is most apparent. That it is a safeguard to the throat is generally admitted, and writers of authority have insisted on its value as a protection against toothache, and facial neuralgia. This is a goodly sum of advantages to the credit of the beard. DR. CHABBERT, of Toulouse, has, however, yet more to say in its favor. According to this practitioner, the beard seems to be a very efficient defense against that form of facial paralysis, which is caused by cold. This affection is far more common in women than in men, though the latter are, of course, more exposed to the cause that produces it. PROFESSOR ANDRI, of Toulouse, has seen several cases of this affection in women, but not one in man—he has heard of one, indeed, which would appear to be an excellent example of the exception which proves the rule, for the patient was a "lyric artist" with the faccia di musico, so distasteful to Lord Byron. PROFESSOR PITRES, of Bordeaux, has seen twelve cases in women and only two in men.—*British Medical Journal*, November 24, 1894.

Fever in Blenorrhea.—M. TREKIOLLI has found variations of temperature in acute blenorrhea. The thermometer can go as high as 39° C., and the fever, generally speaking, is in accord with the intensity of the discharge.—*Union Médicale*, November 24, 1894.

Treatment of Urethritis in Women.—M. E. ROLLET, after showing that urethritis claims always immediate treatment, tells of the various remedies which can be employed externally and internally. With a special sound ending in a full tip, he opens the neck of the bladder, and performs lavage of the urethra. The washings with corrosive sublimate, (1:2000) or the permanganate of potash (1:250) give the best results. An antiseptic crayon may be inserted, or the urethra coated with a preparation of resorcin (10:30). The antiseptic vaginal walls act as barriers between the bladder and the uterus. This is the method adopted at the clinic of Antiqueille.—*Gazette de Gynécologie*, November, 15, 1894.

Circumscribed Atrophy of the Hair and Skin of the Scalp.—ROBINSON (*Lancet*) describes several cases of an affection of the scalp which he has seen, in which one or more atrophic spots occurred upon the head. These areas, containing no hair whatever, resembled the scars left by lupus erythematosus. The patients have all been women. The author is inclined to ascribe as an etiological factor in this malady the method which women employ of dressing the hair. An inflammation, which results in the atrophy, is caused by the manner in which they put the hair up tightly on pins.—*International Medical Magazine*, November, 1894.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

Trional in Delirium Tremens.—RUSSELL BELLAMY found that trional controlled the delirium of delirium tremens with greater rapidity and safety than other hypnotics. Treatment was commenced by giving a calomel purge and twenty grains of trional, mixed with ten minims of tincture of capsicum; if the condition permitted, a very hot bath was given and its temperature gradually lowered. The patient was then placed in bed and restrained. If, after thirty minutes, the delirium showed no sign of abatement, ten grains of trional were given, and if necessary, twenty grains in another hour. As a rule, sleep followed when fifty grains had thus been administered, and the pulse and respiration were stimulated. This stimulating action was attributed to the methylic and ethylic elements in the composition of the drug. This remedy, which can be administered either as a mixture with water, in capsules, or dry on the tongue, was always well borne by the stomach, and in one case was rapidly absorbed when administered by the rectum. In all cases forced feeding, in small quantities often repeated—milk, eggs, and soup—was resorted to.—*British Medical Journal.*

Perchloride of Mercury in Whooping Cough.—RAUBITSCHEK, knowing the want of success attending the usual treatment of whooping-cough, determined in the case of his own three children to resort to a novel procedure. He thoroughly saturated a cotton-wool tampon with a 0.1 per cent. solution of perchloride of mercury, introduced it into the mouth, pressed it against the base of the tongue, thus allowing the fluid to trickle downwards over the epiglottis, and finally withdrew it; at the same time swabbing the tonsils, uvula, and soft palate. This procedure was carried out daily, or every other day, according to the severity of the case, and was attended with the best results, not only in the three cases referred to, but also in fourteen other children similarly treated. An improvement was noticeable on the second or third day, and all the patients were either cured or relieved within eight or fourteen days. One case appeared to be arrested during development by five applications of the solution. The author considers any poisonous effects to be impossible.—*British Medical Journal*, October 13, 1894.

Iodoform in Tuberculous Phthisis.—A. FOXWELL has had considerable experience with iodoform in the treatment of tuberculous phthisis during the last eight years, and he considers it the most satisfactory of all the antiseptic drugs which have been used in tuberculosis. His notes show that 59 per cent. of the cases treated improved, and 17 per cent. grew worse. From his statistics it appears that the advanced cases did as well as the early ones. This, the author thinks, to be mainly due to the favorable nature of the advanced cases, those containing localized cavities, or those in which considerable fibrosis had taken place. The usual prescription was a 1-grain pill, to be taken 6 times daily; the dose never exceeded that amount, and was occasionally less, the average being 5 grains daily. In three cases only were any symptoms of poisoning detected, and these were merely of a mild gastric nature. The author also tried the drug in conjunction with oil and tonics, and compared both classes of cases with those in which oil and tonics alone were used. The conclusion he arrived at, after a three years' trial was, that iodoform, given by itself, gave better results than any other drug or combination of drug he had tried, or seen tried. It soothed the nervous system of erethic subjects; it very greatly lessens the cough and expectoration; it powerfully increased nutrition, the patients often becoming quite plump under its continued use; finally there was as great, if not greater, improvement in the physical signs than the author had seen accomplished by any other mode of treatment—except climate and hygiene. As regards mode of administration, the author believes it well to begin with 6 grains in the day, and if this be well borne, order the dose to be increased by 2 grains every other day, till 20 grains are reached; keep the patient on this for 3 months and gradually reduce the dose during the other 3 months.—*British Medical Journal*, September 10, 1894.

The Treatment of Tapeworm.—DR. LESLIE OGILVIE states that the usual treatment of this disease by means of castor oil at night, followed by a drachm of extract of felix mass next morning and another small dose of oil three hours later, is unsatisfactory, as it is liable to dislodge much of the parasite, but leaves the head, which cannot then be removed until proglotides have again formed in sufficient number to absorb an amount of the poison necessary to destroy the parasite. Sulphate of magnesia, with tincture of jalap, is a better purgative than castor oil, as the latter often fails to remove the mucus which covers and protects the tenia. When much mucus is present in the stools, alkaline aperients should be given for several days before the active treatment is begun. To sum up, prepare the patient by light dieting, give purgatives suitable for removing excess of mucus at bedtime, and, if necessary, repeat them at 7 o'clock next morning; let a dose of the vermifuge be given at 8 A. M. and another at 9 A. M.; wash away the remains of this from the bowel, even if the worm has passed, by castor oil at 11 A. M., and look for the head.—*Lancet*, August 4, 1894.

Antitoxin in Diphtheria.—Dr. Kertz has reported to the Berlin Medical Society very satisfactory results obtained by the use of Aronson's antitoxin for diphtheria. From the beginning of the present year until March 14th, he had treated, according to ordinary methods, 86 cases, with a mortality of 41.8 per cent. From March 14 to June 20, 128 cases were treated by the antitoxin, with a mortality of 13.2 per cent. An injection of 5 to 25 c.c. of antitoxin was administered in the back below the scapula, and repeated the next day if there was not any improvement. The prophylactic effect of the substance, which is said to be innocuous, was also to some extent demonstrated, 72 of the brothers and sisters of the affected children being given an injection, with the result that only 8 of them contracted the disease, and that in a very mild form.—*Lancet*, July 21, 1894.

MEDICINE AND PATHOLOGY.

By Albert Abrams, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

Observations on the Therapeutics of Asthma.—Dr. James K. Crook accepts the definition of Biermer, viz: "Bronchial asthma is a neurosis depending upon tonic spasm of the bronchial muscles, and caused by faulty innervation of the pneumogastric nerve." The causes of the disease may be internal and external. Among the former may be mentioned cases due to the presence of enlarged bronchial glands, disorders of the uterus, stomach, kidneys, or nasal passages, or to bronchitis. Among the external causes enumerated are, odor of certain animals—horses, dogs, rats—the pollen of plants, the fumes of sulphur matches, or of certain burning vegetable substances., or the emanations of feathers, etc. The etiological factors must always be considered in the rational treatment of asthma. The therapeutic measures resolve themselves into the alleviation and abridgement of the paroxysms, and the prevention of their recurrence. In recent medical literature upward of 70 different remedies recommended for relief or cure of asthma are found. The following drugs are worthy of consideration: *Stramonium.*—This remedy has been in use since 1802. It acts by producing general muscular relaxation, and its use should be suspended upon the advent of giddiness or confusion of sight. *Tobacco.*—In those unaccustomed to its use, tobacco is a very severe depressing nauseant and emetic. It may be placed in the *index prohibitorum* with stramonium. *Lobelia.* This is more efficient than the foregoing, but it is required in large doses to be effective. A tablespoonful of the tincture must be taken, and repeated at intervals until nausea is produced in most cases. *Belladonna.*—This drug has been justly celebrated in the treatment of asthma. It has not only succeeded in curtailing the paroxysms, but in some cases its effects have seemed to be permanent. During the paroxysm the tincture may be given in 10-drop doses every 15 minutes, to the point of tolerance if necessary. In some cases a hypodermic injection of $\frac{1}{60}$ to $\frac{1}{80}$ of a grain of *atropine* will arrest the attack in a few minutes. *Nitrate and Nitrite of Potassium.*—These salts have been used in asthma for about 50 years. The former in the form of cigarettes, which owe their efficacy, according to Germain Sée, to the formation of protoxide of nitrogen and carbonic acid gas, which act as an anesthetic. *Nitrite of amyl* is declining in use. Observations have also confirmed the futility of *nitroglycerin. Chloroform* will arrest any asthmatic paroxysm, but the obvious danger attending its use prohibits its administration except under the physician's own direction. *Ether.*—This remedy is safer than the former. The internal administration of the *compound spirits of ether* (Hoffman's anodyne), is of undoubted efficacy in many cases. It should be given in half-drachm doses during the attack, at quarter-hour intervals, until relief is obtained. The employment of the remedy in this way, conjoined with the liberal use of strong black coffee, constitutes one of the most efficient methods of dealing with asthmatic paroxysms. *Morphine.*—This drug is very efficient by hypodermic administration, but its use should be restricted to urgent cases. *Hyoscyamus* acts in a similar manner to morphine, though with feebler effect. *Chloral Hydrate.*—This drug as a remedy in asthma is diminishing *pari passu* with its decline in therapeutics generally. Some of the newer products, *antipyrin*, *antifebrin*, and *phenacetin* have been recommended, but their value has not been established. *Grindelia.*—The author, notwithstanding the opinion of Bartholow, has not met with a case of asthma in which he could convince himself that grindelia possessed the slightest efficacy. *Quebracho.*—This drug is highly recommended by Penzoldt, who is of the opinion that it acts by increasing the oxygen-carrying power of the blood. *Euphorbia* is said to possess a distinct therapeutic value in asthma. *Pyridin.*—Professor Sée places a drachm of this drug on a plate (which evaporates in 20 minutes) in the room with the patient, allowing him to inhale it as it evaporates. Its effects are sometimes excellent. It should never be used in cases of organic heart disease, nor in conditions of great debility. In some cases where single remedies fail, a combination of several of them will prove successful in aborting the paroxysm. A good formula is as follows:

℞.	Syrup. ipecac.	
	Spirit. eth. comp.	āā ʒ iv
	Sodii bromidi	ʒ iv
	Tinct. belladon.	ʒ ii
	Aq. lauro-ceras	*ad* ℥ iv—M.

S.—Take 2 teaspoonfuls at the beginning of the attacks. Repeat twice at 15 minute intervals, if necessary. During the intervals of the asthmatic paroxysms, a most important factor consists in searching for, and, if possible, removing the cause. The nasal passages, tonsils, uterus, etc., should receive due attention. Bronchitis is a frequent and important accompaniment of asthma, and if not directly causing the affection, it certainly, in many cases, increases the susceptibility to it and augments the severity of the attacks. *Iodide of potassium* owes its prominence in the treatment of asthma by controlling the coexisting bronchitis, as it seems to have little influence in asthmatic cases unattended by bronchitis. *Bromide of potassium* is sometimes successful in opposing the asthmatic paroxysm and diathesis. *Arsenic* and *Strychnine* are extensively used. The latter is supposed to possess a specific action on the structures investing the pulmonary alveoli. A favorite prescription of the author for asthma is the following:

℞.	Liq. potass. arsenit.	m xxxii
	Tinct. nucis vomicæ	
	Tinct. belladonnæ	āā ʒ iii
	Acid. hydriodic.	m xxxii
	Elix. chinchonæ	*ad* ℥ iv—M.

S.—A teaspoonful 3 times a day, before meals. To be carefully increased by 5-drop daily installments, if required, until the dose is doubled.—*The Post-Graduate.*

The Etiology of Pain in the Back.—Dr. S. Erben says (*Wiener med. Presse*): Pain in the back may be due to many different conditions. Other symptoms are to be sought. The eruption of herpes zoster, spondylitis, pyrexia (suggestive of infectious diseases or visceral inflammation). Examination of the abdominal and thoracic organs is necessary to detect a beginning pneumonia, pleuritis, pneumothorax, or tuberculosis. Interscapular pain, with dysphagia, might indicate mediastinal tumor, such as esophageal cancer, or an aneurism. Affections of the stomach, bowels, liver, and spleen, give pain usually confined to that part of the back between the fifth and ninth dorsal vertebræ. Constipation often causes dorso-intercostal neuralgia, gastric catarrh, ulcer, cancer, or atony, may cause severe dorsal pain. The genito-urinary tracts, especially in women, very often produce back-ache. General conditions, such as anemia, chlorosis, spinal diseases, especially meningitis, of the dura mater, or the pia and tabes dorsalis, hysteria, and traumatism are also to be considered. All these being excluded, neuralgia or rheumatism is the sole condition.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. Hoisholt, M.D., Assistant Physician, State Asylum for Insane,
Stockton, Cal.

Criminal Anthropology.—In a recent essay on this subject Prof. Lombroso, of Turin, describes what he terms the "criminal type." The features characteristic of this type are found in the faces of most regicides and assassins of presidents, notably Fieschi, Guiteau, and Nobiling. To this type belong also the promoters and leaders of reigns of terrors, such as Carrier, Jourdan and Marat. Among noted anarchists he describes the bomb thrower, Ravachol. Lombroso says: "What first forcibly impresses the beholder of Ravachol's face is its bestiality. Its asymmetry is strongly marked; the nose deviates greatly to the right, the ears are implanted on the head at different heights, and the lower jaw is heavy, square and prognathic." In speaking of Ravachol's history, he says: "The pupil of a primary school until the age of fifteen, Ravachol left it almost absolutely illiterate. Designed by his parents for a simple mechanical trade, he abandoned his apprenticeship, because unable or unwilling to acquire even its rudiments. He became a hopeless idler, committed thefts and circulated counterfeit money. He disinterred a corpse and robbed it of its jewels. He murdered an old hermit of eighty-four years, in order to steal his money. At about the same time, he attempted to kill his mother for a fancied offense. It was established during Ravachol's trial that his grandfather, Koenigstein, and his great-grandfather both perished on the scaffold, convicted of murder and arson.—*Alienist and Neurologist*, October, 1894.

Pacchymeningitis Interna Hemorrhagica in General Paralysis of the Insane.—Dr. Bristowe reports two cases of this condition occurring in the Somerset and Bath County Asylum. The patients were middle-aged men, presenting the usual clinical symptoms of general paralysis. The first patient died from convulsions. At the autopsy, the pia mater was found adherent to a sac, to which it was connected by fibrous processes containing blood-vessels. This sac separated the pia mater from the dura mater over the whole lateral and upper surface of the brain, with the exception of the median area, and contained apparently fresh blood. The membrane composing the sac was found, on microscopical examination, to consist of fully-developed vascular fibrous tissue, destitute of epithelium. It contained no crystals of hematoidin, and there was no sign of old clotting. The second patient died after gradually developing coma, preceded by clonic spasms of the left arm. At the *post-*

mortem examination, a sac of false membranes was found on each side of the brain, covering the frontal, parietal and occipital lobes on the upper and lateral surfaces, with the exception of the parts immediately adjoining the longitudinal fissure. It was slightly adherent to the pia mater. The left sac contained fluid blood with a few recent clots. That on the right side contained only a few drachms of colorless serum, and its membranes were very thin and semi-transparent, and only slightly vascular. The left sac was more vascular, blood-stained, but contained no trace of hematoidin or clot. In this second case there were no large vessels leading from the pia mater. The writer does not think the results of the autopsies in these cases corroborate the view that this condition is due to compensatory hemorrhage after shrinkage of the brain, especially in the second case, in which the colorless sac presented no evidence of having ever been in contact with blood.—*Journal of Mental Science—Dublin Journal of Medical Science.*

The Treatment of Traumatic Epilepsy.—DR. MANTEUFFEL has published an article on this subject, basing the ideas expressed upon the assumed fact that jacksonian epilepsy arises from an anatomical lesion of a motor area. The surgeon is generally able to definitely locate the lesion on the brain surface if the attack be observed early when a small group of muscles are involved. The treatment has formerly been to remove the scar tissue in the bone and scalp, but not to let it extend further than the dissecting up of the dura mater. The writer, however, advises with Horsley, the removal of the cortex, or if no lesion is evident the center involved. This removal has no lasting effect in destroying the function of the part, as its labor is assumed by another portion of the brain. A relapse of the disease may come from the new scar tissue produced, but it will be after some time, and a little freedom will be a great benefit to the patient. The author believes with Kocher, that the epileptic crisis is due to a variation of pressure and circulation that produces a "commotio cerebri," or microscopic traumatism of a small portion of brain-substance, whose influence radiates out over a large area. This "commotio" may be produced by alterations in pressure in the cerebro-spinal fluid, or jarring within the brain, owing to the increased irritability of the special portion of the cortex.—*St. Petersburger med. Wochenschrift—American Journal of Medical Sciences*, October, 1894.

The Specific Gravity of the Urine of the Insane.—DR. UMBERTO STEFANO, of Padova, has made a careful investigation of 60 cases of mental diseases for one or more months, and has arrived at the following conclusions: In all cases of acute insanity independent of special forms, the specific gravity ranged from 1,030 to 1,040, and sometimes higher. If the form is of short duration, the specific gravity will fall as the psychic symptoms diminish, until it reaches the normal, or even lower. When the remission of the psychic symptoms is followed by an exacerbation, the specific gravity of the urine will again increase. If the course of the disease is long, and tends to become chronic, the density of the urine will ordinarily commence to diminish after a time, until it reaches normal or falls below. In cases of imbecility, paranoia, senile dementia and general paralysis without spells of excitement, the specific gravity of the urine is not increased. But if continued frenzy and excitement develop, it will increase to 1,030 or 1,040. The writer believes that the results of an examination of the urine of the insane will enable one to judge as to the prognosis and course of the disease.—*Revista Sperimentale di Fren. edi Med. Legale—Journal Nervous and Mental Diseases.*

Case of Aphasia with Left Hemiphlegia.—Dr. Moltchanoff reports the case of a man of intemperate habits, who had a paralytic attack 2 years before his admission to a Moscow hospital, which left him with left hemiplegia, amnesic aphasia with word deafness. It was ascertained that he had always been right-handed previously to the attack. At the autopsy, two foci of softening were found in the right hemisphere, one occupying the posterior part of the first temporal convolution, the other in the third frontal. No lesion was found in the left hemisphere.—*Revue Neurologique—Dublin Journal of Medical Science.*

FORMULÆ.

Excoriations in Children.—Pritchard uses:

Salicylic acid	gr. viii
Bismuth subnitrate	ʒ ii
Starch	ʒ iss
Ointment of rose	℥ i

Insect Bites:

Ammonia water	45 minims
Collodion	15 minims
Salicylic acid	1½ gr.

S.—One drop to be applied to each spot affected.

Crushing Injuries of Fxtremities.—Reclus employs the following antiseptic salve, applied on pieces of sterilized gauze, over the whole wound, previously cleansed as thoroughly as possible:

Salol.	
Resorcin	āā ʒ iii
Antipyrin	ʒ iii
Boric acid	ʒ v
Iodoform	gr. xv
Vaseline	℥ v

—*Medical and Surgical Reporter.*

Menorrhagic, Chlorosis.—Dr. Ch. Ligeois prescribes:

Sulphate of iron	gr. 38
Extract of hyoscyamus	gr. 15
Alcoholic extract of hydrastis canadensis	gr. 78
Powdered licorice root	gr. 78

Make 100 pills.

S.—Two at each meal, both during and between the menstrual periods.

Fissure of Nipples:

Aristol	ʒ iss
Liquid vaseline	℥ i

S.—Apply after each nursing.—*Archives of Gynecology.*

Calomel.—To remove obstructions, promote absorption, stimulate and correct the secretions, and give new vigor or tone to the entire digestive and circulatory apparatus, Daughton uses a formula somewhat as follows:

Calomel	60 gr.
Powdered socotrine aloes	10 gr.
Rhubarb	15 gr.
Powdered columbo	10 gr.
Powdered cloves	5 gr.

Make 60 pills and give 1 every 2 or 3 hours until the stools are bilious, *i. e.* black, glistening and tarry-looking.—*Southern Practitioner.*

Antiseptic Powder.—Pick:

Hydrarg. chlorid. corros.	gr. $\frac{1}{5}$
Ac. borici	℥ i
Ac. tannici	gr. x
Sac. lactis	*ad* ℥ ii

Mix sublimate gradually and thoroughly with the sugar, then add the rest. Useful where iodoform is usually employed.—*New York Medical Journal.*

"Chelsea Pensioner."—Lord Anson paid three hundred pounds for the privilege of publishing the following prescription for chronic rheumatic arthritis:

Sulphur	℥ i
Cream of tartar	℥ i
Rhubarb	ʒ iv
Gum guiac.	ʒ i
Make 1 powder and add honey	℥ xvi

Mix well, and take 2 tablespoonfuls in a tumbler of white wine and hot water on going to bed, and repeating the dose on getting up in the morning. —*Louisville Medical Monthly.*

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for November, 1894.—The deaths registered in 73 town districts of the State, during the month of November, in a population of 763,723, correspond to an annual rate of 15.66 a thousand, the total mortality having been 997. 91 deaths were due to zymotic diseases, giving an annual rate of 1.42 a thousand. Of these, 11 were due to diphtheria, 18 to cholera infantum, 29 to typhoid fever, 11 to diarrhea and dysentery, 7 to cerebro-spinal fever, 2 to whooping cough, 10 to croup, 1 to intermittent and remittent fevers, 1 to scarlet fever, 1 to measles, and 0 to small-pox. 285 deaths resulted from diseases of the respiratory organs, giving an annual rate of 4.44 a thousand. Of these, 182 were due to consumption, 68 to pneumonia, 22 to bronchitis, and 13 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.76 and 1.06, respectively. 83 deaths resulted from diseases of the heart, 3 from alcoholism, 1 from erysipelas, 50 from cancer, and 409 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 587,000, was 16.20 The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from Stockton.

METEOROLOGY.

Error in the Report from Santa Barbara for October.—In the report from Santa Barbara for October, 1894, the September data were used. The report should read as follows: Mean temperature 62.6, highest 92.5, lowest 48.5, mean highest 70.7, mean lowest 54.6, mean daily range 16.1, number of days rain fell 2, total rain fall 0.68 of an inch, mean relative humidity 77, clear 18, fair 4, cloudy 8, prevailing wind west.

Summary for November.—*Temperature.*—The normal temperature of the State for November is 53.4°; the average for November, 1894, was 56.2°, a departure from normal of +2.8°. The highest monthly mean was 72.9°, at Volcano Springs, in the desert regions of San Diego county; the lowest, 38.8°, at Truckee, in the mountain regions of Nevada county. The maximum temperature was 104°, on the 7th, at Indio, in the desert regions of Riverside county; the minimum, 5°, on the 30th, at Boca, in the mountain regions of Nevada county. The greatest monthly range was 70°, at Winchester; the least, 27°, at Point Lobos. The absolute monthly range for the State was 99°.

Rainfall.—The normal precipitation for the State for November is 2.43 inches; the average for November, 1894, was 0.61 inches, a departure from the normal of -1.82 of an inch. The greatest monthly precipitation was 5.07 inches, at the Crescent City Light House; the least, 0, at several stations in the southern portions of the State.

Wind.—The prevailing direction of wind was north and west.

Unusual Features.—The unusual meteorological feature of the month was an extended dry period. The month was also an exceptionally warm one, being 3° warmer than usual.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for November, 1894.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean........	Highest........	Lowest........	Mean Highest........	Mean Lowest........	Mean Daily Range........	No of Days Rain Fell......	Total Rainfall........		No. of Clear Days........	No. of Fair Days........	No. of Cloudy Days........	Prevailing Direction.	
Auburn..........Cal.	61.2	82	40.0	------	------	------	----	1.09	------	----	---	---	N.W.	Southern Pacific Company.
Berkeley......... "	53.7	74	45.0	65.0	50.0	15.0	1	1.35	83.0	27	1	2	N.W.	Obs. University of California.
Colfax........... "	59.2	94	33.0	------	------	------	----	0.00	------	----	---	---	N.E.	Southern Pacific Company.
Eureka.......... "	51.0	69	37.0	57.0	45.0	12.0	5	2.03	93.0	6	17	7	N.W.	Weather Bureau Dept. Agr.
Fresno.......... "	58.6	82	35.0	73.0	44.0	29.0	1	0.27	61.0	22	6	2	N.W.	" " "
Indio............ "	70.5	104	46.0	------	------	------	0	0.00	------	----	---	---	E.	Southern Pacific Company.
Los Angeles.... "	59.0	92	38.0	73.0	46.0	27.0	0	0.00	84.0	18	12	0	W.	" " "
Monterey....... "	54.6	72	38.0	------	------	------	----	0.32	------	----	---	---	S.	Southern Pacific Company.
Napa........... "	56.2	80	37.0	67.0	45.0	22.0	2	1.34	76.0	19	9	2	S.	Station Napa Insane Asylum.
Oakland......... "	55.9	73	42.0	64.0	48.0	16.0	1	1.34	89.0	25	4	1	N.W.	Chabot Observatory.
Paso Robles.... "	55.0	81	30.0	72.0	38.0	34.0	1	0.09	50.0	21	3	6	N.	Southern Pacific Company.
Red Bluff....... "	59.0	87	39.0	72.0	46.0	26.0	2	0.95	60.0	20	7	3	N.W.	Weather Bureau Dept. Agr.
Sacramento. ... "	58.2	78	35.0	70.0	46.0	24.0	1	0.48	62.0	23	5	2	N.	" " "
San Bernardino "	------	------	------	------	------	------	----	------	------	----	---	---	------	A. K. Johnson, M. D
San Diego....... "	57.0	78	45.0	65.0	50.0	16.0	0	0.00	------	17	7	6	N.W.	Weather Bureau Dept. Agr.
San Francisco.. "	59.4	79	46.0	67.0	52.0	15.0	1	0.88	76.0	21	8	1	N.W.	" " "
Santa Barbara.. "	57.4	78	44.0	65.0	50.0	15.0	1	0.19	82.0	13	8	9	W.	Hugh D. Vail.
Santa Cruz...... "	58.7	83	39.0	72.0	46.0	26.0	1	0.40	------	24	2	4	W.	W. R. Springer.
Yuma...........A. T.	68.3	92	45.0	84.0	53.0	31.0	0	0.00	34.0	24	5	1	N.E.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

Occidental Medical Times.

Communications are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: JANUARY, 1895

LANE HOSPITAL.

On January 2, 1895, Lane Hospital was formally opened for the reception and treatment of patients. The event was commemorated by an address, which appears elsewhere, and also by the performance of a surgical operation as the inaugural act in the opening of this institution. By this effusion of blood, analogous to the act of the ancient augur, and in the character of his address, the donor has conformed to the custom of antiquity, to the models and literature of which he has a reverent attachment.

It was originally intended that the institution should bear the name of PAULINE LANE HOSPITAL; in fact, for some months this name stood traced on the block of granite, which now spans the vestibule of the building. This honor, it is clear, would not have been inappropriately bestowed, when it is stated, that nearly all of the excellence to be found in the interior arrangement of the building is due to the care and watchful supervision of this lady; a task which has continued during the last three years. With renunciation of any claim to which her services individually entitled her, MRS. LANE has preferred that the hospital bear the name which is mutually shared by herself and husband.

The hospital is situated at the corner of Clay and Webster streets; it has a front of 140 feet and a depth of 130 feet; it is adjacent to Cooper Medical College, and has been erected by DR. LANE at a cost of $160,000, and presented to the corporation of Cooper Medical College. The aggregate of the gifts of lands and buildings presented to the College by DR. LANE amounts to nearly a half million of dollars.

It should be stated that the land on which the hospital is built, was purchased at a cost of $28,000 by CAPTAIN JAMES M. MCDONALD, and presented to the corporation as a site for the hospital.

This generous benefactor has also given $25,000 for the further support of the hospital. COL. CLAUS SPRECKELS has also given $25,000 for the same purpose. MR. ANDREW B. MCCREERY has given $6,000 for the maintenance of a bed in the hospital. The Faculty of Cooper College have donated from their treasury $20,000 for furnishing and equipping the institution for its future work. For some time, fees will be charged for the admission of patients; it is, however, expected that donations will finally reach such an amount, that the worthy poor can receive gratuitous attention.

The building is of brick, faced with granite; and a system of heating and ventilation, perfect in all its details, has been provided at great cost. Besides the arrangements for ventilation, purity of air is further insured by the position of the kitchen, which is placed in the upper part of the building, on a story above all the patients. There are one hundred beds for patients, for each of which provision has been made for a space of air ranging from 1,700 to 2,000 cubic feet.

The medical and surgical service will be rendered by the Faculty of Cooper Medical College; yet the hospital will be open to all regular physicians, who may desire to place and to attend their patients there. Physicians sending patients to the hospital will be permitted to charge such fees as may have been agreed upon between them and their patients.

With the advantages and facilities, which are here hastily and briefly enumerated, there is no doubt, that for Lane Hospital there is a successful future; and that in this case, as in that of Cooper College, the founder and donors' hopes will be abundantly realized.

THE COMMENCEMENTS—COOPER MEDICAL COLLEGE.

The graduating exercises of the Class of '94, Cooper Medical College, were held Thursday evening, December 6, at the college auditorium, corner Sacramento and Webster streets. The graduating class was the largest ever sent forth from a medical college on the Pacific Coast, numbering 73 members. Notwithstanding the inclemency of the weather the hall was filled to its utmost, even the vestibules being crowded. DR. STANLEY STILLMAN, the valedictorian, delivered an address, witty, yet full of good counsel to the young physician. LIEUT. COL. GREENLEAF, U. S. A., delivered an address upon the medical department of the army, from the time of its inception to the present day.

The following are the names of the graduates: Bertram Francis Alden, Edith Victoria Anderson, Richard Selden Anthony, Herbert Isaac Bloch, Thomas DeHaven Blodget, Mary Alameda Bowman, Henrietta Elizabeth Brighouse, Charles Lot Browning, Bertram Ferdinand Burgess, Christian Charles Hadley Carlson, David Cannan, M. A.; Frank Wesley Carpenter, George Fred. Chalmers, Mary Clayton, Arthur Carestine Collins, Patrick Joseph William Conran, George M. Converse, Louise Bacon Deal, George Washington Desrosier, Edward Francis Donnelly, Ansel Tupper Eagar, Alfred Eichler, John Rice Eldridge, B. A.; Landon Rives Ellis, August Fehlen, B. A.; William Bruce Ffoulkes, Alfred B. Grosse, Edward Lorenzo Grossman, Ph.G., Oliver Deveta Hamlin, Charles Anderson Hauber, George Story Holbrook, Judson Arthur Holland, Thomas Heuston Hughes, Ph.G.; Eugenie Adelaide Hurd, Thomas George Inman, Ph.G.; Francis Fenelon Johnson, Fujimatsu Kawano, Fred. Charles Keck, John Edson Kelsey, Ph.G.; John Joseph Kingwell, Myron Edmund Kohn, Claude Resnor Leech, Amelia Levinson, James Everett Maddux, Andrew Augustine Maguire, Marah Eleanor McClun, Joseph Stephen McCormick, Joseph Jason Medros, Ph.G.; Joseph Mora Moss, Avron S. Newman, Franklin Crawford Newton, Theodora Tiffee Purkitt, Adam Marsden Ritchie, William Humes Roberts, Charles Henry Roese, Ph.G.; Adolph Gustav Rosenthal, Bertha Anna Saunders, Walter Kendall Scott, D.D.S.; George William Sevenman, Thos. Edward Shumate, Ph.G.; Frederick Wright Simpson, Larz Anderson Smith, James Franklin Smith, M.S.; John Joseph Spottiswood, Tyre Harrison Stice, Charles Elliott Thompson, George Howard Thomson, Jr.; William Todd, Emil Nicholas Torello, Chas. Edward Turner, B. A.; Julian Christian Voje, Jacob Hial West, Frank Reeve Woolsey.

The total number of students in attendance during the past session was 229, the number of matriculates being 80.

NOTES.

Additions to the Staff.

Commencing with the new year, the following additions to the staff have been made: Dr. Geo. B. Somers, who has been one of our best workers, will assist in the charge of the Surgical Department. In order to admit of the incorporation of material which is of interest to the surgeon, and which has at present no place in our departments, the title in future will read: "Surgery and Anatomy." In the Department of Obstetrics, Gynecology, and Pediatrics, Dr. Wm. Fitch Cheney, of San Francisco, will assist the present collaborators. Dr. Cheney has the reputation of being a hard worker and a good student, qualities that are essential in the task that he has undertaken.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, November 27, 1894.

The President, W. F. WIARD, M.D., in the Chair.

New Members.—L. A. HARCOURT, M.D., F. W. BIRDSALL, M.D., and J. L. CROOK, M.D., were duly elected members of the Society.

Abscess of Antrum and Frontal Sinus.—DR. F. B. SUTLIFF exhibited a patient with a sinus over the left eye, which was discharging pus. There was also a sinus over the mouth, leading into the antrum. Patient had had a tumor over the left eye since boyhood. One year ago he had had an attack of typhoid fever, at which time the tumor broke and pus was discharged into the mouth. There is now a small opening above the left eye; fluid, on being forced into the antrum, causes pus to be discharged from above the eye.

DR. H. W. STRADER, who had attended the patient on a former occasion, said he had recommended a long incision to be made above the brow, and the pus cavity to be thoroughly evacuated.

DR. W. E. BRIGGS thought the trouble was not in the orbital cavity, but in the frontal sinus, and that a free opening should be made into the sinus.

DR. F. R. WAGGONER read a paper on the subject of "Medico-Legal Insanity."

DR. C. B. NICHOLS said: The passing on a man's insanity should be done by a commission, appointed either by the Governor or by the Court, and if an individual were found insane he should be confined in an Asylum. The physician's mind was liable to be prejudiced in favor of the side by which he was retained. The Examining Board should be an impartial one, and in criminal cases, if a man were insane he should certainly not be punished. In the past, the gravest mistakes have been made, and this is due, principally, to the lawyers who place any physician who may testify, in a false light before the jury. It was also notorious, that men of experience and ability—entitled to be considered experts—often gave very different opinions.

DR. J. H. PARKINSON: The medical profession has incurred a vast amount of discredit on this subject. The general practitioner, as a rule, is not qualified to testify in these cases. The remedy for this injustice lies in the creation of a commission or jury, that would be impartial, and able in character. The establishment of an asylum for the criminal insane, preferably, in connection with one of the State's prisons, was also demanded. Massachusetts has already done something in this matter. In the majority of criminal cases, where persons claimed to be insane, the medical witness is placed upon the stand and asked a hypothetical question, to which he must answer "yes" or "no," and which he has no opportunity of explaining to court or jury. This was manifestly unfair, as it placed the witness in a false, and often in a ridiculous position.

DR. F. B. SUTLIFF said: Let a commission be ever so well qualified, there will always be problems which it cannot solve. Any man who is living a life contrary to that which he was living before, might be said to be insane. No insane person is safe, and for that reason every insane man should be committed.

DR. W. A. BRIGGS: In judging of a man's mental condition, we proceed more from practice than theory. The mental condition is not a normal one; if it were so, we would all be insane at times. Webster has defined insanity as "mental unsoundness." A man is medico-legally insane when he commits a crime during the period of his insanity. If he commits a crime because he is insane, he is not responsible. It is very difficult to say whether a man commits a crime as a consequence, or merely during the existence of insanity. The difficulty is, in the practical application of this theory.

DR. T. W. HUNTINGTON: There are two practical phases of the question: (1) The great difficulty of getting reliable, truthful evidence in medico-legal cases. Reliable witnesses hesitate to give testimony that will bring the accused to the gallows. (2) The physician is rarely placed in a more delicate position than when requested by an attorney to testify in a case as a witness. The attorney virtually says: "appear as my witness." The speaker said he had pursued the uniform course of refusing to testify in such cases. He would distrust his ability to study the case from the standpoint of another, and to testify in that particular interest.

DR. H. W. STRADER believed it would be a difficult matter to establish a hospital for the observation of patients for a number of years.

DR. L. A. HARCOURT said the subject was a broad one, and one that had cast a stigma on the profession. In the case of Guiteau, men on the witness stand testified to totally opposite conditions, according to the side on which they had been summoned. This cast a grave reflection on the profession. A commission, if chosen solely on account of the experience and ability of its members, would be good, but if selected on account of their political pull, the conditions would be even worse than at present. If the men who gave testimony were absolutely independent of lawyers and Courts, we might hope for better results; the sole object of the lawyer in these cases is to confuse the jury. They frame a hypothetical question, and the expert has to answer "yes" or "no," without a chance for explanation. The expert should swear to the exact condition of the man as he finds it.

DR. THOS. ROSS: I believe that some insane persons are responsible. In one case, I remember a man restrained himself as long as he was under bonds, and the very day that the responsibility of his bondsmen ceased, he again committed acts of violence. In the case of Guiteau, he was adjudged insane, but was considered responsible. The framing of hypothetical questions was a fraud, as the witness was not allowed to explain the bearing of his answers.

DR. C. E. FOWLER: The weakness of our jury system is brought out by these cases of medico-legal insanity. The usual jury has no analytical power, and as soon as the case is over they hardly know where they stand. The Judge is the most competent man to decide such a case. There would be less miscarriages of justice if these cases were left to his decision.

DR. G. A. WHITE: Intelligent men fail to agree in medical matters, and there is no reason why they should be more likely to agree in the diagnosis of insanity. The same conditions will exist a century hence. Miscarriages of justice are, however, so rare that we can well afford to rest upon the intelligence of the medical profession and the honesty of the judiciary.

DR. H. H. LOOK: The testimony which comes before the jury is often conflicting, yet we have no better system than trial by jury. The jury is better able to judge of a man's mental condition than the physicians, or even the Judge. The jury feels, where the Judge thinks, and I would certainly trust to the former. The appointment of an insanity commission might be better or worse, but I believe the present system is the best.

DR. H. L. NICHOLS: In the miscarriage of justice the jury is not so much to blame, when medical men will testify in an exactly opposite manner. Under these circumstances, he did not think it strange that men are acquitted. The murderer should be restrained of his liberty if acquitted on the ground of insanity. A good commission would be an excellent idea.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, November 13, 1894.

The President, W. WATT KERR, M.D., in the Chair.

New Members.—D. C. CONRAD, M.D., and E. K. JOHNSTONE, were duly elected members of the Society.

DR. H. KREUTZMANN exhibited several specimens removed by abdominal section from patients at the German Hospital. The specimens all represented inflammatory disease of the uterine appendages. There were two cases of double chronic interstitial salpyngitis. The tubes represented hard infiltrated and contorted masses, with some pus present in the lumen of each at the time of operation. The ovaries were more or less degenerated. There were three cases of double salpyngitis with a large abscess of one ovary in each. The tube walls were infiltrated, the tube distended, and it contained pus. The ovary had been transformed into a large sac, filled with thick pus at the time of operation. Examination for bacteria was negative, and no cultures were made. One case was a single salpyngitis, the walls of the tube being indurated by hyperplastic connective tissue. This was removed incidentally with a fibroma. All these patients gave the usual history. In some instances they had suffered for several years; and different methods of treatment had been adopted. Upon opening the abdomen the usual picture was presented. All the organs in the pelvic cavity were matted together, forming one coherent mass. The removal of the appendages was done in a typical way: first separating the intestines, and then working from the abdominal end of the tubes toward the uterus, and ligating. Drainage was used in one case where a good deal of pus had escaped from a ruptured ovarian abscess. In all the cases where pus was present, there had been a moderate evening rise of temperature. As conditions for the successful treatment of these cases, he regarded the following as important: (1) An incision of sufficient length to give a good view in every step of the operation. (2) For the same reason, the use of the Trendelenburg position. (3) Careful work and absolute control of hemorrhage, no matter what time might be consumed in the operation. (4) Gauze drainage only in septic cases, no flushing. The immediate result of operation in these cases is good. All of the patients from whom these specimens had been obtained had recovered. The next question arising, was the ultimate results that would be obtained. The great majority of them get perfectly well, but in some women the good results were somewhat marred by an exudation, which occurs around the stump. These exudations seem only natural when we consider the number of adhesions that have been separated in the pelvic cavity after an operation of this kind. In most cases these drawbacks finally disappear. Other sequelæ are abdominal, or pelvic fistulæ, which may persist for a long time. Ventral hernia may also occur, but these complications usually follow where the wounds have been drained. In view of the fact that articles are being constantly written, urging conservative and non-operative treatment in inflammatory diseases of the uterine appendages, we must inquire: Are these operations justifiable? There can be no doubt whatever in those cases of unmistakable abscess, but there may be grounds for question in the cases of interstitial salpyngitis. In the speaker's opinion we should operate on these cases if, under judicious treatment, the palpable tubo-ovarian mass does not disappear. *Restitutio ad integrum* will not take place; sterility is always present, the appendages are useless as far as the woman is concerned, and are only a source of suffering. Operations for the removal of diseased organs are done by surgeons every day; joints are excised, testicles removed, eyeballs extracted, not to mention the appendix vermiformis; yet a decision, whether or not to operate in the cases reported, will often be difficult, many circumstances having to be considered. As far as the *modus operandi* is concerned, removal of the uterine appendages seems to be the natural procedure; incision and drainage of the abscess through the vagina and above the pubes, may be necessary for the time being, to restore the patient's forces, physically, for a more radical operation.

DR. C. G. KUHLMAN said: I will confine myself to the following points: (1) Extirpation of the fallopian pubes must be considered in relation to certain morbid conditions of the appendages, and, if the patient is in fit condition, and necessity requires it, we may open the abdomen from the sternum to the pubes.

(2) We know so little about the so-called gonococcus, that we are hardly justified in referring to it in connection with pyosalpinx. The gonococcus, however, is not a pus forming microbe; that process is due to saprophytes, and may be terminated by the *vis medicatrix naturæ*, hence we should exhaust every therapeutic means, before resorting to the knife. (3) We should not operate during an acute or febrile state; we should give the woman a chance, and wait until chronicity has set in. Ambition on the part of the young, and avarice on the part of the older practitioner is, in a great measure, responsible for the wholesale unsexing of women that goes on at the present time. (4) Diathesis, tuberculosis, syphilitic and cancerous, plays an important role in these cases, that do not do well after operation.

Dr. G. W. Davis thought that the gonococcus was too often named as the cause of these pelvic troubles. It appears that the infection may extend from the endometrium, as in an endometritis following confinement, abortion, etc. In operating, the smallest incision possible should be used. He thought drainage was employed more frequently than was necessary. As to operating in acute cases, he believed this must be left to the judgment of the surgeon, but, as a general rule, it was better to wait until the acute stage had passed.

Dr. Kreutzmann in replying, said: He must emphasize the fact that gonorrhea was the principal cause of these cases, and this was generally accepted by authority to-day. It is even now a question whether syphilis was not the cause of some of these pelvic troubles. From pure culture experiments, it appears that apparently dead gonococci have spores that will reproduce their kind, and are therefore capable of setting up inflammation and infection. In his experience, about every three women examined at the polyclinic had some disease of the ovary, or tube. Of course, it was not necessary to operate in all these cases. He would operate even if fever were present. Fever is sometimes an indication for operating. Thus, in puerperal peritonitis and in puerperal metritis, it is sometimes better to operate in the acute stage than to wait. There are some disadvantages of the Trendelenburg position, but they are overbalanced by its advantages. He believed in making as small an incision as possible, but the size of the incision made no difference with the process of recovery.

Election of Officers.—The following were elected officers for the ensuing year.

President	C. C. WADSWORTH.
First Vice-President	C. G. KUHLMAN.
Second Vice-President	F. B. CARPENTER.
Recording Secretary	A. P. WOODWARD.
Assistant Recording Secretary	L. M. F. WANZER.
Corresponding Secretary	L. M. F. WANZER.
Treasurer	W. S. WHITWELL.
Librarian and Curator	D. W. MONTGOMERY.
Trustees	HENRY GIBBONS, W. F. MCNUTT, JAMES SIMPSON.
Committee on Medical Ethics	J. SIMON, F. Z. BAZAN, J. H. BARBAT, G. W. DAVIS, J. D. WHITNEY.
Committee on Admissions	H. H. HART, G. F. SHIELS, J. M. WILLIAMSON, T. B. DEWITT, E. R. C. SARGENT.
Committee on Finance	H. M. SHERMAN, KATE I. HOWARD, C. E. FARNUM.
Committee on Library and Publication	D. W. MONTGOMERY, G. W. FULLER, W. B. LEWITT.
Executive Committee	W. F. CHENEY, C. G. KENYON, S. S. HERRICK.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, November 5, 1894.

The President, F. BAZAN, M.D., in the Chair.

Keratoconus—Senile Cataract—Zonular Cataract.—Dr. A. Barkan presented several interesting cases: The first was one of keratoconus, conical cornea or staphyloma pellucidum. He said: This case is a typical example of this strange affection. The patient is a blacksmith, who came to me two years ago complaining of defective vision. The disease is rare in its pure form. It has been known for 100 years or more, and has received a good deal of study, being looked upon as a sort of enigma. But little is known as to its etiology. It develops at from 15 to 25 years of age, is more frequent in women than in men, and is influenced somewhat by heredity. Panas reports a case of a grandmother with keratoconus whose grandchildren had, all but two, congenital cataract. These two had conical cornea. The subjects of keratoconus often have defective teeth or deformities of the skin, and in some cases evidences of congenital lues. The affection generally involves both eyes. Histologically, the condition has been shown of late, by an English author, to consist of a thinning of the central portions of the cornea. This region seems not to be sufficiently developed, and makes less than normal resistance to the intraocular pressure, and hence bulges out. Functional disturbances are great. The vision is impaired in such wise, that it cannot be restored with glasses. The patient brings objects near the eye, and this often gives rise to a suspicion of myopia. The trouble increases, the images are diffused, the patient instinctively turns the head so that those parts of the cornea having the best curves are in the line of vision. When seen with oblique light, say with a candle, the cornea is seen to give multiple reflections. The image of the candle reflected from the center of the cornea is much smaller than the image from the sides. When seen *en profile* the conical form is readily made out. The cornea remains clear in all its parts and is abnormally thin, as shown by the indentation made in it by pressing with a pin-head, or a probe. The cornea is weak, and with any over-exertion may burst. This man, I have insisted, must give up his occupation of blacksmith, as entailing too violent exercise. If left alone the condition gradually grows worse, but rarely leads to destruction of the eye, or to complete blindness. There is nothing that has not been attempted by way of treatment, yet there is nothing that has been followed with much succsss. Repeated paracentesis to lessen intraocular pressure, a small iridectomy for the same purpose, various methods of cutting off the apex of the cone; these methods have given very little lasting satisfaction. Of late years treatment by compression by means of properly applied bandages has been tried, and combined with the use of pilocarpine and eserine to diminish the intraocular pressure. Panas recommends that such treatment be persisted in for six to eighteen months. The thermo-cautery may be applied to the apex of the cone, even entering the anterior chamber, in the hope that the resulting cicatrix will contract sufficiently to reduce the curvature of the cornea. This leaves an opaque scar however. A flap has been excised from the cornea and the oval wound sutured, and in one or two cases has been fairly successful. This case has been treated with eserine and it has done no good, and I am about to try surgical means. It is interesting to note that mild cases have been improved with the use of cylindrical lenses, or combinations of cylinder and spherical glasses. Of late a hyperbolic lens has been used. Panas has lately tried to follow Herschel's advice and build up a glass cone over the cornea, to rest upon the cornea. From an optical standpoint the method is a success, but tears accumulate and cast off epithelium, making the added lens opaque. Cocaine will make the apparatus tolerable for a limited time. *Senile Cataract.*—This patient is the subject of double senile cataract. The right eye was operated on some time ago, and the left within a week, by the so-called flap extraction, a modified Graefe operation. Some operators prefer to make the extraction without an iridectomy. It certainly leaves an ideal pupil. The method has received its greatest advocates in Panas, of Paris, and Knapp, of New York, who are, by the way, in my judgment, the two greatest operators on the eye. There is danger following it of prolapse of the iris within two or three days; an attack of vomiting, or a simple sneeze may be sufficient to drive a little of the aqueous out of the wound and carry the iris with it. At the meeting of Ophthalmologists, held in England last July, Knapp admitted that he had 10 per cent. of prolapses, to which Swanzea replied: "If you will succeed in reducing your prolapses to 1 per cent., I shall adopt your operation." Without an iridectomy, it is much more difficult to deliver the lens, nor can you so well clear out remaining parts of the cortex. For this a second operation is not infrequently required after a month or so. The only objection to the iridectomy is, that the pupil is larger than normally, which, as Swanzea says, worries the "ophthalmic sentimentalists." It gives less showy eyes, but it gives more good results. *Zonular Cataract.*--In this case one zone only of the lens has become opaque. The condition is clearly congenital, as it generally is. The child has enough sight to walk about, but not enough to read. If the opacity remains well defined, the chances are that it will remain stationary, when an iridectomy may be made, so that light will be admitted around the opaque spot. I prefer to extract the lens though, at the expense of the accommodation. First, the whole lens is rendered opaque by puncture with the needle, after which it is gradually absorbed. Of course the child will have to wear cataract glasses, one pair for reading and another for distant vision.

DR. G. F. HANSON read a paper entitled "Palatable Medicine." [published at p. 19].

DR. C. E. FARNUM considered the subject of considerable importance. He had experimented with quinine, trying to disguise its bitter with syrup of yerba santa. He believed that the yerba santa paralyzes the nerve endings of the tongue for the time, and has found that painting the tongue with the fluid extract answers as well as mixing the quinine with the syrup of yerba santa. The latter method has the disadvantage that in time some change takes place so that the bitter is no longer obscured. It is not probable that the yerba santa makes the quinine temporarily insoluble, but that it contains an active principle which benumbs the tongue.

DR. F. Z. BAZAN asked if it were not often the case that the efforts at disguising noxious tastes impaired the action of the drugs.

DR. L. C. LANE referred to the change by which the ill-tasting valerian was changed chemically into an allied substance, having the delicious flavor of fresh pears. He told of a case of erysipelas with an ugly wound on the leg, in which quinine was prescribed in powder to be taken in rice wafers. The patient, who was an ignorant man, forgot just how the medicine was to be taken, and took the quinine powder in the ordinary way, and then, moistening the wafers, applied them to the wound on the leg.

DR. W. F. CHENEY, referring to Dr. Bazan's question, said that in the case of cascara sagrada, all of the non-bitter preparations were inferior to the ill-tasting fluid extract. He had known of a child that ate a whole box of tannate of quinine chocolates, with no effect whatsoever, and he had come to regard that preparation as of comparatively little value.

DR. F. B. CARPENTER called attention to the difficulty some people have of taking pills. He said that if they would hold the head in the natural position, and not throw it back, they would have far less difficulty.

DR. HANSON, in replying, said it was unquestionably true, in many cases, that the vehicles changed the chemical character of the drugs. Thus, with the iron preparations, it is supposed that in the great chemical laboratory of the human body, nearly all forms of iron are changed to the chloride or an albuminate, and are thus absorbed, so that it matters but little in what form the iron is given. Yerba santa contains an acid resin, which probably acts as an anesthetic to the nerves of the tongue, but it is probably true that the thick syrup mechanically covers the particles of quinine, so that if swallowed quickly they do not come into contact with the mucous membrane. The tannate of quinine certainly is not so active as the sulphate, and there is no trouble in giving a double dose.

SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE AND THROAT SURGEONS.

Regular Meeting December 20, 1894.

The President, A. BARKAN, M.D., in the Chair.

Penetrating Wounds of the Eye.—DR. W. A. MARTIN presented a case of perforating wound of the globe of the right eye. The patient, an Italian, was tightening the hoops on a wine cask, using one hammer as a wedge and pounding with a second one. A piece flew from the wedge hammer striking him in the eye. He presented himself at the Polyclinic 40 days after the accident. There were no active inflammatory symptoms present. There was a cicatrix in the inner angle extending about a quarter of an inch in the sclera, and continuing a somewhat lesser distance on the cornea. There was a complete division of the iris, a small fragment of same adhering to the anterior capsule of the lens. There was no noticeable opacity in the lens. Behind the lens one could see a small reddish cloud in the track of the wound, and the white reflex of the detached retina filling the inner half of the field of vision. The outer portion of the field was clearer, but there was no reflex from the fundus. There was no vision in the eye.

DR. K. PISCHL said he would attempt to remove the piece of steel with a magnet, but at the same time he would have the man prepared for an enucleation, if the magnet failed. There was a question in his mind if enucleation would not be the better operation, as owing to the condition of the interior of the eye, even with the successful removal of the foreign body, there was still danger that sympathetic ophthalmia would result.

DR. W. F. SOUTHARD: If the case occurred in my practice I should enucleate at once without making any attempt to remove the foreign body. The risk of attempting to preserve the globe would be too great. If removed the man could return to his work with a reasonable assurance that the other eye would not be endangered.

DR. H. G. BURTON: The man being a laborer, and probably not being within reach or under the observation of a competent oculist, I think the eye should be enucleated, there being no positive assurance that removing the piece of steel would guard the sound eye from future trouble.

THE PRESIDENT: We are all thoroughly agreed that there is great danger to the sound eye. If the man were my own brother I should not be satisfied with anything but an enucleation. In this particular case I might use the magnet, and remove the foreign body if possible, and watch the after developments. If there remained any symptoms of trouble, after waiting a reasonable time, I should proceed to enucleate. This being a favorable opportunity, I shall occupy a few moments in describing a couple of cases that have come within my own practice during the past few months. The first was a young blacksmith from Oregon, who had already suffered the loss of one eye. When I first saw him, several weeks after the injury, there were no active inflammatory symptoms. In the cornea a slight opacity and in the vitreous the foreign body could be detected. It was a delicate matter to decide on the operation, but there was no other course to pursue. The largest Hirschberg magnet was introduced through an opening in the sclera, and the piece of steel removed, after several attempts. At present the vision has improved so that the man can read ordinary print without any trouble. The second case was that of a man from the mining section. He was sent to me eight or ten weeks after the injury. The injury to the eye was also from a piece of steel. On examination one could see some white opaque lens matter floating in the anterior chamber of the right eye, and an opacity in the lens. There was no reflex from the fundus. It was decided to remove the debris from the anterior chamber, and as much of the lens as possible, with the hope that the foreign body would come away at the same time. The operation was performed, but no foreign body was discovered. After waiting several days for the eye to recover from the operation, which it did with no reaction I again examined, and thought that I could see a foreign substance lying in the small remaining pocket of lens matter, and decided to make another attempt with the magnet. The dark spot proved to be a perforation through the detached retina, which was obscured by opaque lens matter still remaining. The eye also recovered from the second attempt. In spite of the eye looking so healthy, I urged the man to have it enucleated, as I was confident that the foreign matter was still there, and that it would almost surely give rise to further trouble; giving his consent I removed the eye. The foreign body, a small splinter of iron [specimen shown] was found near the optic nerve, lying perfectly free, and no signs of a tendency to be encapsuled. The reason I did not succeed with the magnet in the second attempt was that the point did not come within a quarter of an inch of where the splinter lay, although several explorations were made through the vitreous, near approach being prevented by the detached retina.

Conical Cornea.—THE PRESIDENT presented a case of conical cornea shown at a previous meeting, which he had since perforated with a fine cautery point just below the center. The vitreous escaped and the cornea collapsed. In spite of a good-sized pupil an anterior synechia formed. It did not disappear under atropia, so pilocarpin was tried; under this and the increasing tension of the cornea the synechia separated after several days. Vision has improved from $\frac{2}{200}$ to $\frac{8}{200}$.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Anti-diphtheria Toxine.

The anti-diphtheria serum prepared by Dr. Roux, of the Pasteur Institute, is one of the most important topics of the day. Many brilliant cases of successful treatment of diphtheria with the croup vaccine are reported, and their authenticity cannot be doubted. Dr. Roux' paper on the serum, read at the Buda Pesth Congress attracted great attention in France, as in other countries, and inspired a certain confidence, but, nevertheless, there is a certain atmosphere of fear, rather than doubt, surrounding this discovery, and the fear is that this prophylactic may eventually share the fate of Koch's "kochene."

M. Roux has inoculated 500 patients, the mortality decreased 25 per cent. When the serum was used, the local treatment was also continued, and it is asked if isolated injections of the croup vaccine would have been as efficacious. M. Mathieu, in the *Gazette des Hôpitaux*, writes: "M. Roux appears to me to go a little too far in his enthusiasm for the serum therapy. He is not a clinician thoroughly correct when he declares that all local treatment should be suppressed."

At the Pasteur Institute, great stress is laid on the necessity of the bacteriological examination of the false membranes. It is therefore asked if the serum injections would be dangerous in cases of doubtful diagnosis. M. Roux' personal reputation strengthens the hope that the serum may prove to be a valuable antidote for diphtheria; every one capable of judging admits him to be a scientist of the highest order, one not likely to be led away by apparent discoveries; and as devoted to serious research as he is indifferent to vainglory and worldly renown; in a word, an ideal savant. In the French scientific world, the ideal savant is not infrequently found, but if the line of demarcation between that world and the medical be crossed, the instances are very rare.

Whatever the future fate of the diphtheritic serum may be, it ought to be remembered that the first who made experiments to obtain anticroupal vaccine from serum of animals rendered immune, were two pupils of the Berlin Bacteriological Institute, Dr. Behring, a German, and Dr. Kitasato, a Japanese. These must share the glory when it comes, though they will own defeat if unfortunately, and it must be added unexpectedly, defeat occur. The real authors of the serum keep very quiet. The Behring serum is prepared in Berlin; it is to be hoped statistics of its efficacy will soon be published. Dr. Yersin, recently enrolled "Chevalier de la Legion d'Honneur," for his researches in China, on the plague, was also a co-worker with M. Roux in his researches on diphtheria.

The diphtheria in use to render horses exempt, is prepared in the following manner: A fragment of false membrane, or some of the exudation, should be removed from the patient's throat, and cultivated in a tube of coagulated serum. A colony will be formed in 24 hours. A small quantity of this cultivation is placed in alkaline broth, peptonized at 2 per cent. It is then placed in a large glass retort with a lateral channel, which allows the circulation of air on the surface of the fluid, and put in a stove at a temperature of 37° In a month's time the cultivation is completed. A good toxine ought to kill in 48 hours, a guinea pig weighing 500 grammes, at a dose of one-tenth of a cubic centimeter.

This toxine, which is used to render horses immune, furnishes the serum. For the first the inoculations, if toxin used pure would be too dangerous, it must be attenuated by mixing it with *liqueur de Gram* (comp. solution of iodine) in the following proportions: Twelve cubic centimeters of pure toxin to 1 centimeter of *liqueur de Gram*; after the first few inoculations prudently made, pure toxin can be injected, 1 centimeter every few days until 5 cubic centimeters, and even more, can be given, and the injection repeated every 2 days instead of every 5 days. When the horse is supposed to be thoroughly immune, blood is removed from the jugular vein and allowed to fall into a sterilized receptacle; here it coagulates, the serum is thus separated, and by means of an aspirating tube terminating in a balloon-shaped inflation, it is drawn away and spread about in the inflation in sterilized flakes of 20 cubic centimeters. The serum thus prepared must be tested in order to ascertain its antitoxic power. The injection of a dose of 1:50000 part of the weight of a guinea pig made 24 hours before the inoculation of half a cubic centimeter of diphtheria bacillus culture alive, ought to prevent the infection. The bacillus inoculation kills a guinea pig in 24 hours. Serum of 1:50000 centimeters is difficult to prepare, but 1:100000 is easy—it can be reduced to 1:50000. Twenty cubic centimeters of serum is easily injected; the operation takes about 10 minutes; there are hardly ever local troubles, abscesses or sores. Among 300 children thus treated, there were 3 abscesses; the region used for the infection should be washed with bichloride solution 1:1000.

The number of cases successfully treated reported from all parts of France, encourage the hope that the antitoxin, which has so many godfathers, is a real prophylactic against that terrible disease, diphtheria. The Paris Municipal Council has voted 800 francs as a yearly subsidy for the purpose of keeping 20 horses at the disposal of the Pasteur Institute. Each horse costs 40 francs per annum. The Provincial Municipal councils those who do not organize an antidiphtheria institute of their own, send considerable sums to the "serum subscription," in order that all France may be supplied with this vaccine. Havre, Marseilles, and other important towns send medical men to study how the serum is prepared, and to create institutes of their own. At the Paris Pasteur Institute every facility that science and courtesy can give, is offered to students and scientists who wish to work there. The visit of the President of the Republic to the Pasteur Institute was coupled with one to the Trousseau Diphtheria Hospital. M. Cassimir Perier presented Dr. Roux with the insignia of "Commander de la Legion d'Honneur." Dr. Roux, in thanking the President for this honor, said it was a tribute to international science and happily, justly placed Herr Behring and Herr Loefler in the foremost rank in the discovery of the antidiphtheritic toxine. This tardy recognition is better than none. Doubtless M. Roux' numerous friends and admirers, as well as all French loving people would have been better pleased had the recognition been earlier and fuller. We all know that there are spots on the sun, but practical illustrations of truths are disagreeable.

PARIS, December 5, 1894.

REVIEWS AND NOTICES.

PRESCRIBING AND TREATMENT IN THE DISEASES OF INFANTS AND CHILDREN. By Philip E. Muskett, late Surgeon of the Sidney Hospital, formerly Surgeon Superintendent of the New South Wales (S. I. Service.) Third edition, revised, enlarged and rearranged. Edinburgh and London: Young J. Pentland. pp. xvii—334.

This book is a small pocket treatise on treatment of diseases of children, and of all the *vade mecums* on this subject it is certainly the most complete. It is not simply a list of diseases with the remedies appended to them, but in each case the type of the disease is recognised, discussed and the remedy suggested. The book is a useful one.

INTERNATIONAL CLINICS; Vol. I, Fourth Series, 1894. Philadelphia: J. B. Lippincott Company. pp. xxii—358.

The practical value of this work is very distinctly emphasized in the present volume. The first lecture is by Dr. A. Ernest Sansome, upon the treatment of rheumatism, a disease which, notwithstanding the remarkable influence of the salicylates, still remains one of the daily bugbears to the physician. Dr. Sansome bases his treatment upon the theory that the pathogeny of rheumatism is chiefly and essentially humoral; the disease being due to a disturbance in metabolism, whereby certain poisons or toxines are elaborated and produce morbid changes, chiefly in the serous membranes and fibrous tissues, and he calls attention to the different varieties; specifying the treatment best adapted to each The Section of Surgery contains, among other articles, a lecture on Potts' disease, by Lewis A. Sayre, and one on Teno-Suture, by H. Augustus Wilson, both of which contain suggestions which cannot fail to be of daily use. The other sections are equally well represented, so that we have not the least hesitation in recommending this work to the profession as the most complete quarterly epitome of progress in the healing art.

THE CARE AND FEEDING OF CHILDREN; A CATECHISM FOR THE USE OF MOTHERS AND CHILDREN'S NURSES. By L. Emmet, M.D., Professor of Diseases of Children in the New York Polyclinic, Attending Physician to the Babies' Hospital and the Nursery and Child's Hospital, New York. New York: D. Appleton & Co.; pp. 66 Price, 50 cents.

This little work is arranged in the form of a catechism and is specially intended for the use of mothers and nurse-maids, but will no doubt give many useful facts to the practitioner himself. It contains instructions concerning the feeding of children at different ages, the preparation of foods, the bodily hygiene of the child, and the hygiene of its surroundings. Prof. Holt has wisely refrained from suggesting any forms of medication. We advise practitioners to recommend this book to their patients.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held December 13th, the following were granted certificates to practise medicine in this State:

Chas. Eli Adams, Santa Clara; Dartmouth Med. Coll., New Hampshire, Nov. 21,'93.
D. L. Beckingsale, Covina; Univ. of Edinburg, Scotland, Aug. 1,'72.
Chas. O. Cartwright, San Francisco; Med. Dept. Univ. of Michigan, June 27,'89.
Anna M. Flynn, San Jose; Med. Dept. Univ. of Michigan, June 30,'92.
Richard T. Freeman, San Francisco; Royal Coll. Surg., England, Jan. 27,'64.
Frederick C. Gerlach, San Jose; Med. Dept Univ. Pennsylvania, June 7,'94.
Howard S. Gordon, Pomona; Kansas City Coll. Phys. and Surgs., Missouri, March 4,'78.
Shinobu Kobayshi. San Francisco; Nugata Med. Coll, Japan, July 20,'87.
E. R. Layne, San Francisco; Med. Dept. Arkansas Industrial Univ., Arkansas, March 1,'88.
L. K. Mezger, Los Angeles; Med. Dept. Univ. of Michigan, June 26,'89. Rush Med. Coll., Ill. March 31,'91.
Albert S. Mygatt, Otay; Albany Med. Coll., New York. Dec. 26,'71.
John B Pickington, Los Angeles; Cooper Med. Coll., California, Nov. 4,'82.
Mary Scott, Los Angeles; Woman's Med. Coll., Pennsylvania, May 5,'92.
Nathaniel Wallis, Sidney, Australia; Med. Dept. Univ Vermont. Aug. 17,'94.
Fred F. Webster, Sunol; Med. Dept. Univ. Buffalo, New York, Feb. 23,'75.
L. H. Whitehouse, Oakland; Dartmouth Med. Coll., New Hampshire, Oct. 31,'66.
Osville W. Yeargain, San Jose; Med. Dept. Willamette Univ., Oregon, April 6, 91.
John Richard Booth, San Diego; Med. Dept. Univ. of Cal., Nov. 20,'94.
Edwin Bunnell, San Francisco, Med. Dept. Univ. of Cal., Nov. 20,'94.
G. Waverley Clark, San Francisco; Med. Dept. Univ. of Cal., Nov. 20,'94.
Stephen Cleary, San Francisco; Med. Dept. Univ. of Cal., Nov. 20,'94.
Robert Crees, San Francisco; Med. Dept Univ. of Cal., Nov. 20,'94.
Frank Timothy Fitzgibbon, San Francisco; Med. Dept. Univ of Cal., Nov. 20,'94.
August Gerth, San Francisco; Med. Dept. Univ. of Cal., Nov. 20,'94.
Edward John Hill, Eureka; Med. Dept. Univ. of Cal., Nov. 20,'94.
Thos. B. Holmes, Oakland; Med. Dept Univ. of Cal , Nov., 20,'94.
M. B. Mac Innis, San Francisco; Med. Dept. Univ. of Cal., Nov. 20,'94.
F. E McCullogh, Oakland; Med. Dept. Univ. of Cal., Nov. 20,'94.
Mary E. Morrison, San Francisco; Med. Dept. Univ. of Cal., Nov. 0,'94.
Joseph G. Morrissey, San Francisco; Med. Dept. Univ. of Cal., Nov. 20,'94.
Fenelon M. Reith, Sacramento; Med. Dept. Univ of Cal. Nov. 20,'94.
H. A L. Ryfkogel, San Francisco; Med. Dept Univ. of Cal., Nov 20,'94.
Nathalie A. Selling, San Francisco; Med. Dept. Univ. of Cal., Nov. 20, 94.
James G. Sharp. San Francisco; Med. Dept. Univ. of Cal., Nov 20,'94.
Henry W. Stirewalt Traver; Med. Dept. Univ. of Cal. Nov. 20,'94.
Jas. G. Thompson, Modesto; Med. Dept. Univ. of Cal., Nov. 20,'94,

Farrington Wilkes, West Berkley; Med. Dept. Univ. of Cal., Nov. 20,'94.
Henry E. Wright, Bishop; Med Dept. Univ. of Cal., Nov. 20,'94.
R. S. Anthony, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Herbert I. Bloch, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Mary A. Brown,, St. Helena: Cooper Med. Coll., Cal., Dec. 6,'94.
Henrietta E. Brighouse, Healdsburg; Cooper Med. Coll., Cal., Dec. 6,'94.
Bertrand F. Burgess, San Francisco; Cooper Med. Coll , Cal., Dec. 6,'94.
David Cannan, Fowler; Cooper Med. Coll., Cal., Dec. 6,'94.
C. C. H. Carlson, San Francisco; Cooper Med. Coll., Cal., Dec 6,'94.
F. W. Carpenter, Sacramento; Cooper Med. Coll., Cal., Dec. 6,'94.
Mary Clayton, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Geo. M. Converse, San Francisco; Cooper Med. Coll., Cal , Dec. 6,'94.
Louise B. Deal, San Francisco; Cooper Med. Coll,, Cal , Dec. 6,'94.
E. F. Donnelly, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Ansel T. Eagar, San Francisco; Cooper Med. Coll. Cal., Dec. 6,'94.
Alfred Eichler, San Francisco: Cooper Med. Coll., Cal., Dec. 6,'94.
Landon R. Ellis, San Francisco; Cooper Med. Coll., Cal., Dec. 9,'94.
W Bruce Foulkes, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Alfred B Grosse, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
J. A. Holland, Alameda; Cooper Med Coll., Cal., Dec. 6,'94.
Thomas G. Inman, San Francisco; Cooper Med, Coll., Cal., Dec., 6,'94.
J. Edson Kelsey, Berkeley; Cooper Med. Coll., Cal., Dec. 6,'94.
J. J. Kingwell, San Francisco; Cooper Med Coll. Cal., Dec 6.'94.
Amelia Levinson, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
A. A. Maguire, San Francisco; Cooper Med. Coll., Cal. Dec. 6''94.
A. M. Ritchie, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Wm. H. Roberts, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Chas. H. Rose, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Adolph G. Rosenthal, San Francisco; Cooper Med. Coll., Cal. Dec. 6,'94.
Bertha A. Saunders, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Thos. E. Shumate; San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Chas. E. Thompson, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Geo. H. Thompson, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Emil N. Torello, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
J. H. West, San Francisco; Cooper Med. Coll., Cal., Dec. 6,'94.
Frank R. Woolsey, Berkeley; Cooper Med. Coll., Cal., Dec. 6,'94.

CHAS. C. WADSWORTH, Secretary,

Official List of Changes in the Medical Corps U. S. Navy (Pacific Station) from November 20, 1894, to December 20, 1894.

Past Assistant Surgeon Sheldon S. Evans, detached from U. S. Naval Hospital, Mare Island, California, and ordered to U. S. S. "Pinta," at Sitka, Alaska.

Past Assistant Surgeon Michael R. Pigott, to duty at U. S. Naval Hospital, Mare Island, California.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service (District of the Pacific) from November 20, 1894, to December 20, 1894.

Surgeon G. W. Stoner, granted leave of absence for twenty-two days. December 10, 1894.

Past Assistant Surgeon M. J. Rosenau, to report at Bureau for special temporary duty. December 10, 1894.